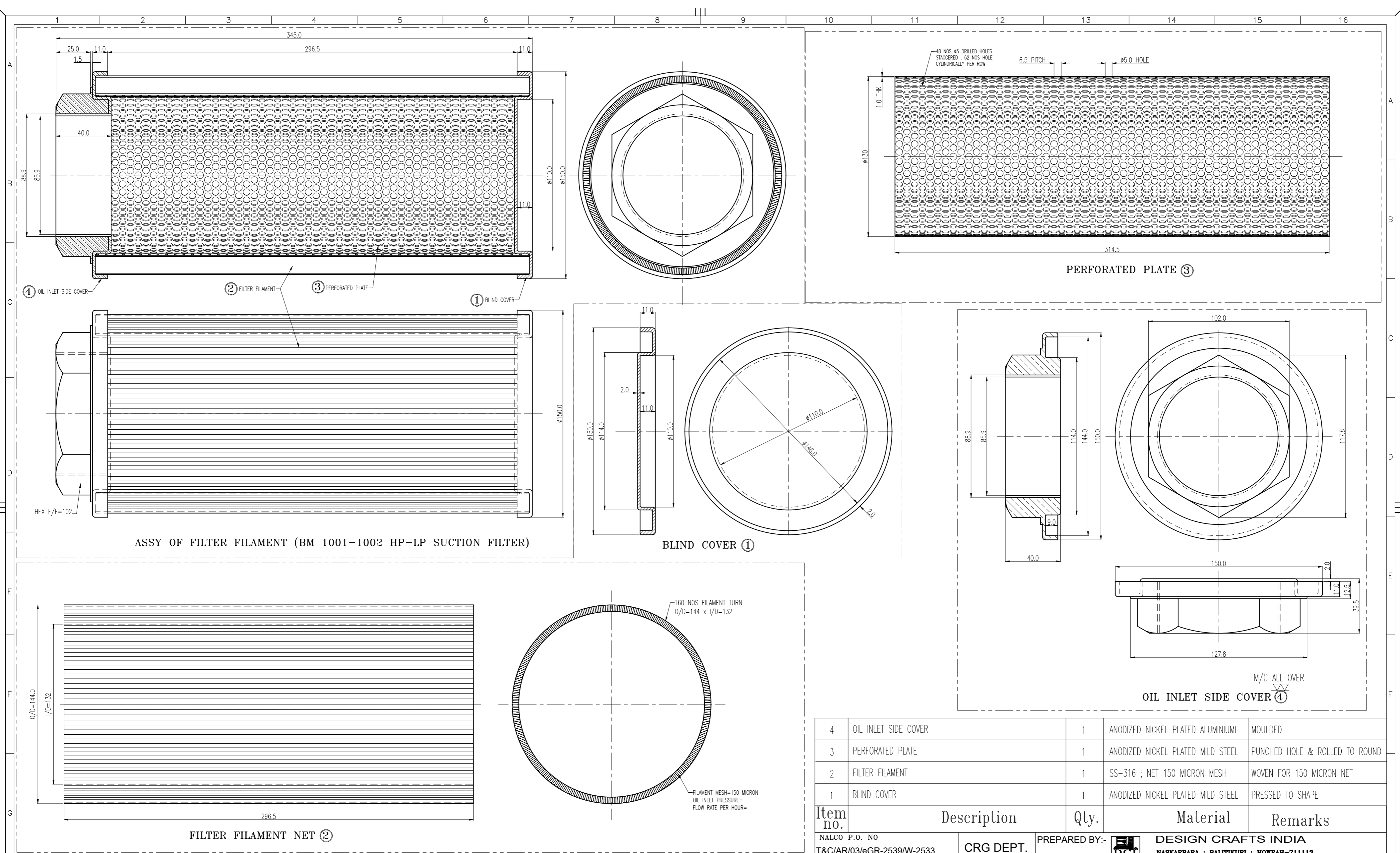


Item Number	Item Title	Item Description	Item Quantity	Unit of Measure	Consignee ID	Delivery Period (In number of days)
1	Filter Element 25D-360-G25 for BM 1001 H_1000068665_1_12506000430	LOW PRESSURE OIL FILTER ELEMENT FOR BALL MILL 1001, 1002 AS PER DRG NO-NALCO/MECH/MISC/6186R0.	16	EA	arbind.singh	180
2	Filter Element 60D-225-G25 for BM 1001 H_1000068665_2_12506000440	HIGH PRESSURE FILTER ELEMENT FOR OIL CIRCULATION SYSTEM ( BALL MILL 1001,1002) AS PER DRG NO-NALCO/MECH/MISC/6187R0	16	EA	arbind.singh	180
3	SUCTION STRAINER FOR SCREW PUMP PH4 BALL_1000068665_3_12506000320	SUCTION FILTER ELEMENT FOR OIL CHAMBER ( BALL MILL 1001,1002) AS PER DRG NO-NALCO/MECH/MISC/6185R0	16	EA	arbind.singh	180
4	Breather for Agitator 17863 Milton Roy M_1000068665_4_66410081200	AIR BREATHER FOR AGITATOR TANK GEARBOX AS PER DRAWING NO-NALCO/MECH/MISC/4562.	16	EA	arbind.singh	180
5	FILTER ELEMENTS 0660-D-020- BN3HC_1000068665_5_12509002831	FILTER ELEMENT FOR OIL CIRCULATION SYSTEM ( BALL MILL 701) AS PER DRG NO-NALCO/MECH/MISC/6184R0	16	EA	arbind.singh	180
6	FILTER ELEMENT FOR BALL MILL_1000068665_6_12509002901	FILTER ELEMENT FOR FLENDER GEAR BOX ( BALL MILL 701) AS PER DRG NO-NALCO/MECH/MISC/6188R0	16	EA	arbind.singh	180
<b>NOTE:</b>	<p>NOTE-1. ITEMS ARE TO BE SUPPLIED STRICTLY AS PER DRG SPECIFICATIONS.  NOTE-2. ALL SIX ITEMS ARE TO BE PROCURED FROM SINGLE SOURCE.  Note-3; PRE-QUALIFICATION CRITERIA- a) EXPERIENCE- ONE PO COPY FOR SUPPLY OF FILTERS TO ANY PSU/GOVT ORGANISATION . b)PERFORMACE- 40% OF QUANTITY AS PER GeM STANDARD.  NOTE-4; DOCUMENTS ARE TO BE PROVIDED FOR PROOF OF PQC- PO AND INVOICE COPY OF PAST SUPPLY.</p>					



CLASS OF DEVIATION	ALLOWABLE DEVIATIONS FOR DIMENSIONS WITHOUT SPECIFIED TOLERANCES IS:2102												
	0.012	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
ABOVE	3	6	12	25	50	100	200	400	800	1600	3200	6400	12800
FINE	± 0.05	± 0.05	± 0.1	± 0.15	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2	± 3	± 4	± 5
MEDIUM	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2	± 3	± 4	± 5	± 6	± 8
COARSE	± 0.2	± 0.5	± 0.8	± 1.2	± 2	± 3	± 4	± 5	± 6	± 7	± 8	± 10	± 12
EXTRA COARSE	± 0.5	± 1	± 1.5	± 2	± 3	± 4	± 6	± 8	± 10	± 12	± 15	± 20	± 25

- NOTES :-**
1. ALL DIMENSIONS ARE IN mm ONLY
  2. ALL DIAMETERS ARE CONCENTRIC TO EACH OTHER & REMOVE ALL SHARP EDGES.
  3. ALLOWABLE DEVIATIONS FOR DIMENSIONS WITHOUT SPECIFIED TOLERANCES AS PER IS:2102 (FINE)
  4. ALL ITEMS SHOULD BE FREE FROM ALL CRACK & OTHER DEFECTS.

Item no.	Description	Qty.	Material	Remarks
4	OIL INLET SIDE COVER	1	ANODIZED NICKEL PLATED ALUMINIUM	MOULDED
3	PERFORATED PLATE	1	ANODIZED NICKEL PLATED MILD STEEL	PUNCHED HOLE & ROLLED TO ROUND
2	FILTER FILAMENT	1	SS-316 ; NET 150 MICRON MESH	WOVEN FOR 150 MICRON NET
1	BLIND COVER	1	ANODIZED NICKEL PLATED MILD STEEL	PRESSED TO SHAPE

NALCO P.O. NO T&C/AR/03/eGR-2539/W-2533

CRG DEPT.

PREPARED BY: **DESIGN CRAFTS INDIA**  
NASKARPARA ; BALTIKURI ; HOWRAH-711113

DRN SEKHAR

CKD G B NAYAK

CKD SHIV SHANKAR SAW

APD D. BEHERA

TITLE: **BM 1001/1002 HP-LP SUCTION FILTER**

ITEM REF No

SCALE: **1 : 1.5**

Area 02

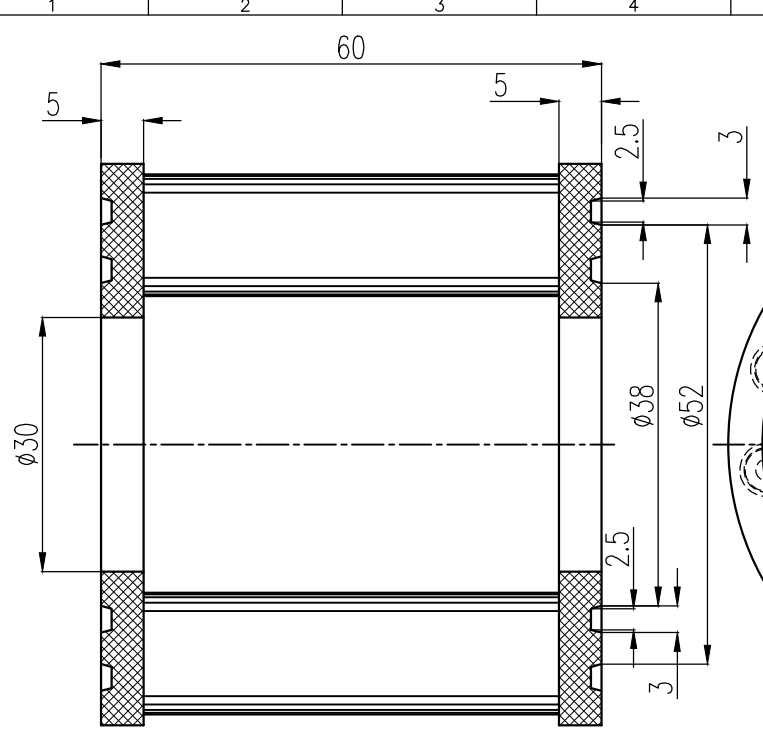
TOT SHT: 1

SHT No: 1

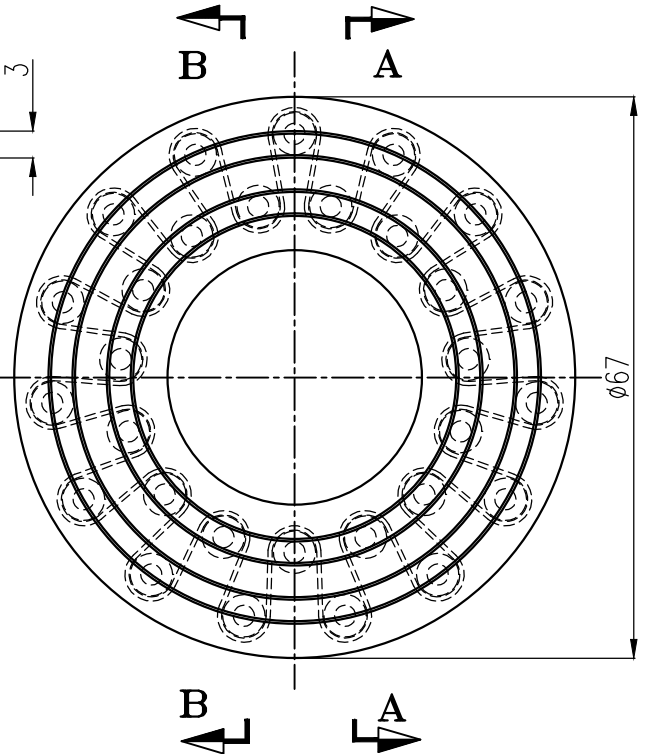
REV: 0

**NATIONAL ALUMINIUM CO LTD.**  
D A M A N J O D I

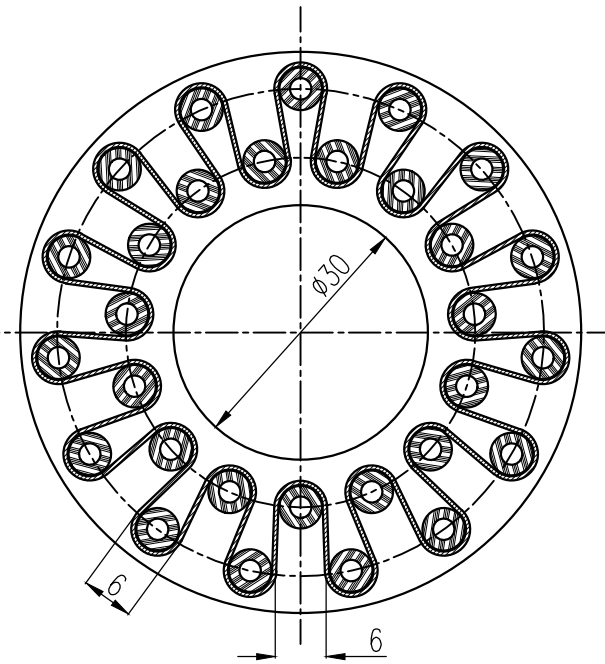
DRG. No. **NALCO/MECH/MISC/6185**



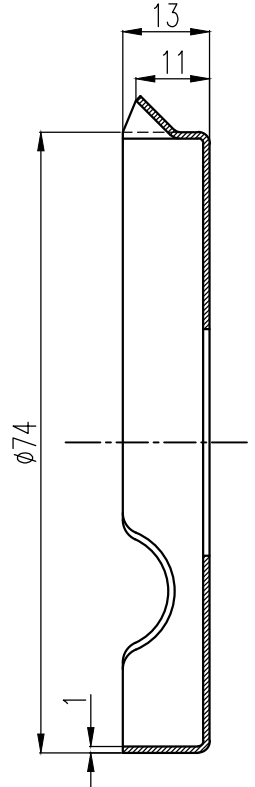
**SECTION B-B**



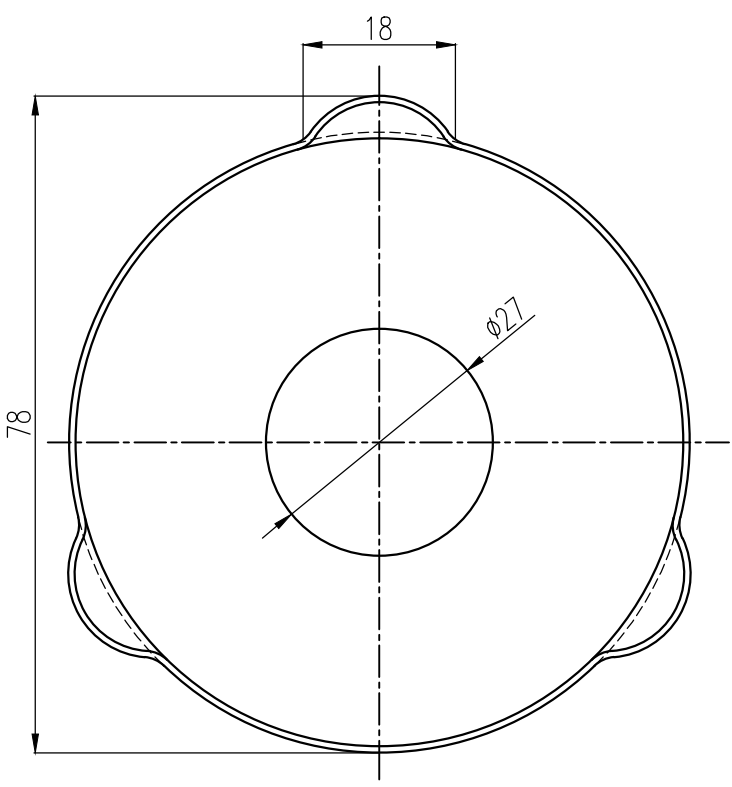
**ELEVATION  
PART NO 1 (FILTER)**



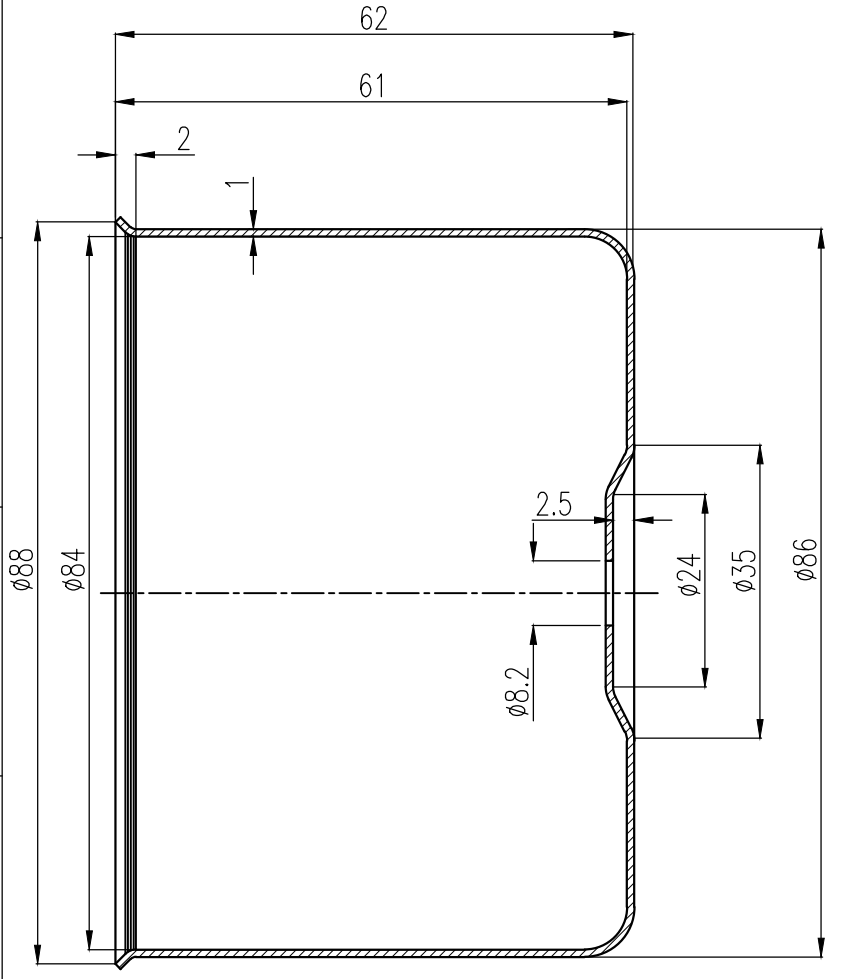
**SECTION A-A**



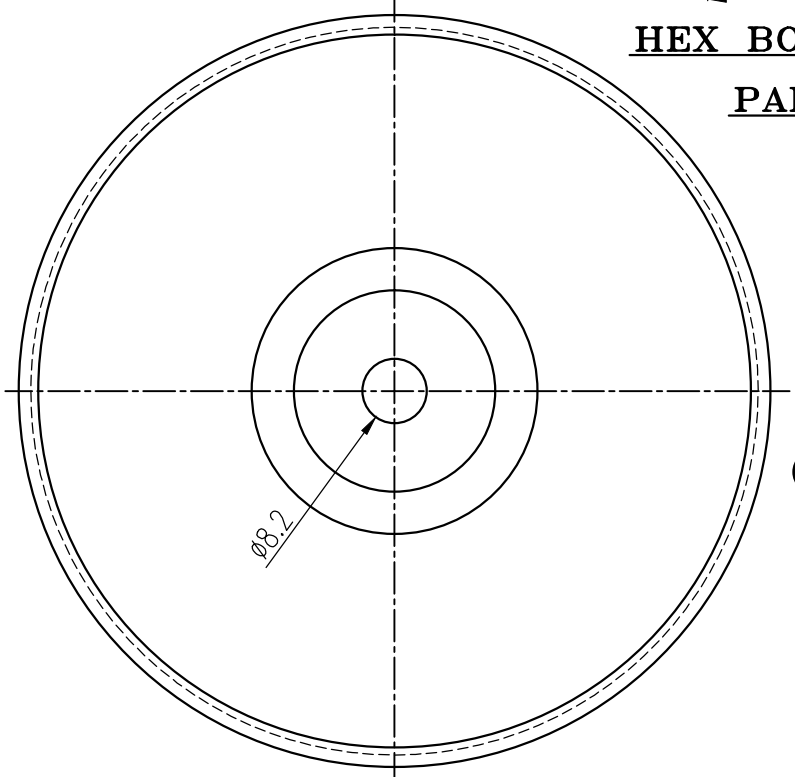
**SIDE VIEW**



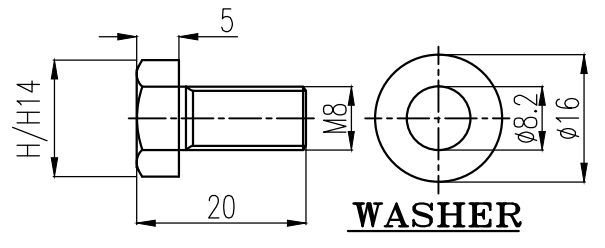
**ELEVATION  
PART NO 2 (COVER PLATE)**



**SIDE VIEW**

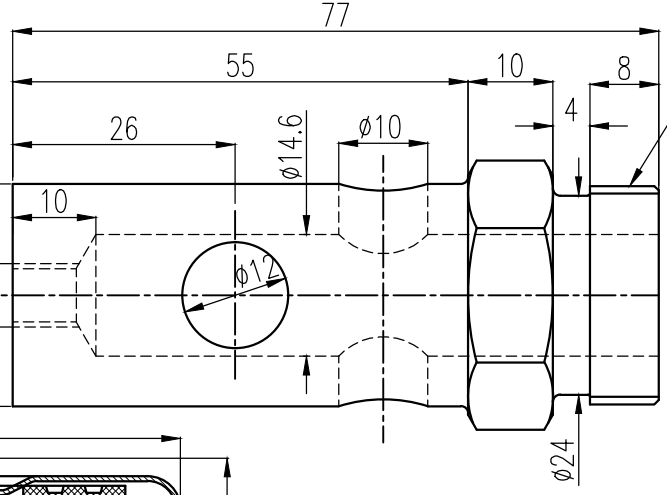


**ELEVATION  
PART NO 3 (OUTER CASING)**



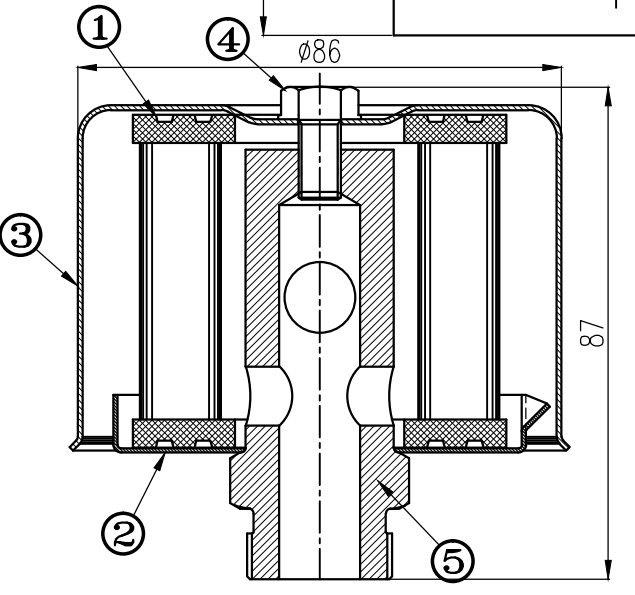
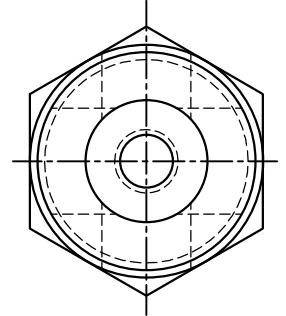
**WASHER**

**HEX BOLT M6  
PART NO 4**



**NIPPLE  
PART NO 5**

3/4" PIPE THD  
O/D=26.2 x14 TPI



**ASSEMBLY**

**NOTES:**  
 ① THIS DRAWING IS THE PROPERTY OF NALCO.  
 ② DO NOT SCALE THE DRG. IF ANY DOUBT PLEASE ASK  
 ③ ALL DIMENSIONS ARE IN MM UNLESS SPECIFIED. & LEVELS ARE IN METRES U.N.O.  
 ④ MACHINED TOLERANCES IS 2012 FINE AND OTHERS IS 2012 MEDIUM UNLESS SPECIFIED  
 ⑤ TEST CERTIFICATE FROM GOVT. APPROVED TEST HOUSE FOR CHEMICAL COMPOSITION AND PHYSICAL PROPERTIES OF THE MATERIAL TO BE SUBMITTED BY THE SUPPLIER  
 ⑥ CERTIFICATE OF N.D.T. TEST (ULTRASONIC, RADIOGRAPHIC) FROM GOVT APPROVED TEST HOUSE TO BE SUBMITTED FOR NO FLAW/ ZERO DEFECT BY THE SUPPLIER.

REV	DESCRIPTION	DATE	BY	CHKD	APPD

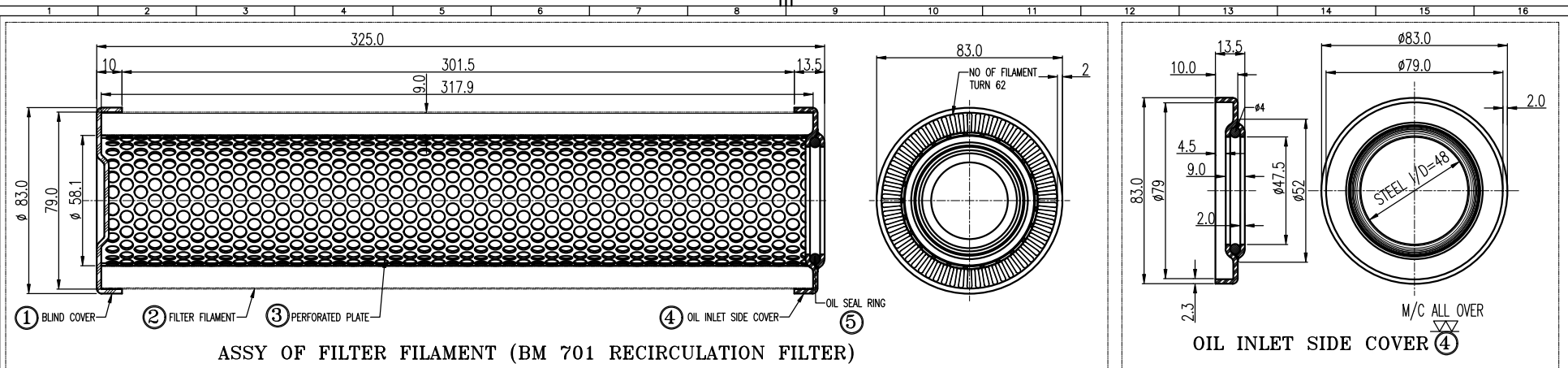
FROM	TO	TOLERANCES AS PER IS 2012
0.5	3	±0.05
3	6	±0.10
6	30	±0.20
30	120	±0.30
120	315	±0.50
315	1000	±0.8
1000	2000	±1.2
2000	4000	±2
4000	8000	±3
8000		±5

ITEM No	NOMENCLATURE	QTY	MATL	SIZE OR STD	WT IN KG.
5	NIPPLE FOR NB 25 PIPE	1	M.S. IS:2062	FINISHED PURCHASE	
4	HEX BOLT M8 + WASHER	1	P-6.3 ; IS:1364	PRESSED TO FORM	
3	OUTER CASING	1	M.S. IS:2062	PRESSED TO FORM	
2	COVER PLATE	1	M.S. IS:2062	PRESSED TO FORM	
1	FILTER	1	HARD PLASTIC WITH FUNNEL CLOTH FILTER	MOULDED	

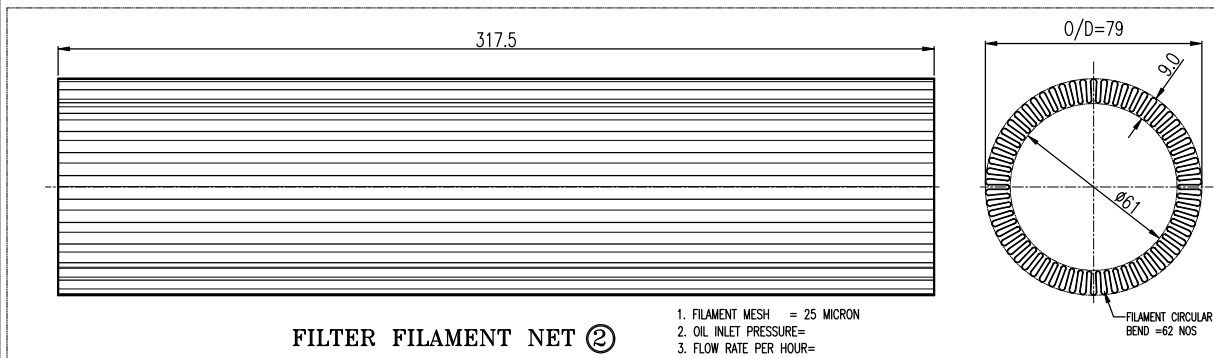
DRN	GOLAK	TITLE	
CKD	SEKHAR	ITEM REF No	
CKD	KARUNALEGY.K	<b>AIR BREATHER PT 3/4" FOR GEAR BOXES</b>	SCALE: 1 : 1
APD	V.K. SINGH	AREA-02/03	TOT SHT 3 SHT No 2

**NATIONAL ALUMINIUM CO LTD. DAMANJODI**  
 DRG. No. NALCO/MECH/MISC/4562



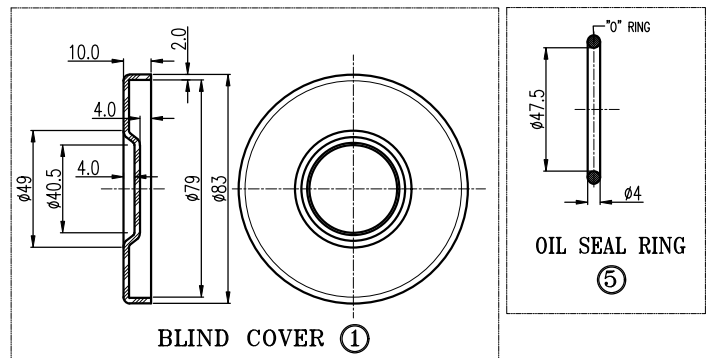
ASSY OF FILTER FILAMENT (BM 701 RECIRCULATION FILTER)

OIL INLET SIDE COVER (4)



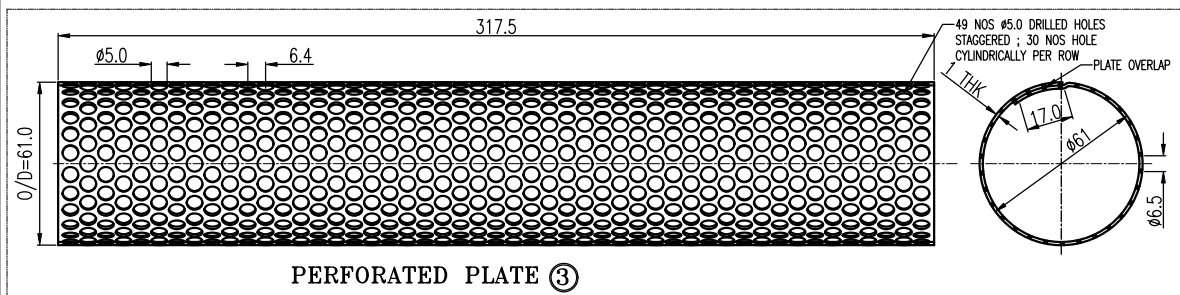
FILTER FILAMENT NET (2)

1. FILAMENT MESH = 25 MICRON
2. OIL INLET PRESSURE=
3. FLOW RATE PER HOUR=



BLIND COVER (1)

OIL SEAL RING (5)



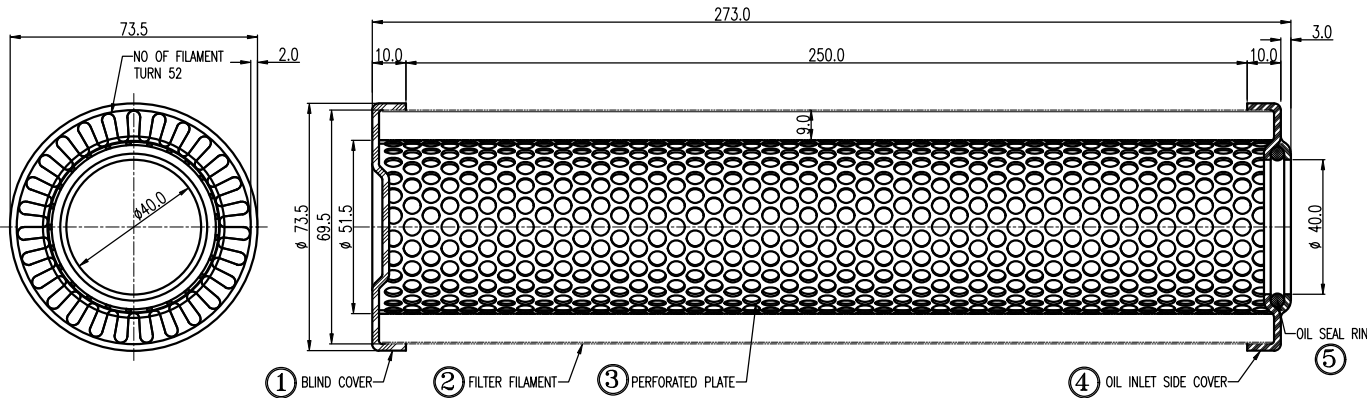
PERFORATED PLATE (3)

TOLERANCE	DEVIATIONS FOR LINEAR DIMENSIONS											
	0.5	3	6	30	120	315	1000	2000	4000	8000	20000	60000
COARSE	± 0.1	± 0.15	± 0.2	± 0.3	± 0.4	± 0.5	± 0.6	± 0.7	± 0.8	± 0.9	± 1.0	± 1.2
MEDIUM	± 0.075	± 0.1	± 0.15	± 0.2	± 0.3	± 0.4	± 0.5	± 0.6	± 0.7	± 0.8	± 0.9	± 1.1
FINE	± 0.05	± 0.075	± 0.1	± 0.15	± 0.2	± 0.3	± 0.4	± 0.5	± 0.6	± 0.7	± 0.8	± 1.0
EXTRA FINE	± 0.025	± 0.0375	± 0.05	± 0.075	± 0.1	± 0.15	± 0.2	± 0.3	± 0.4	± 0.5	± 0.6	± 0.8

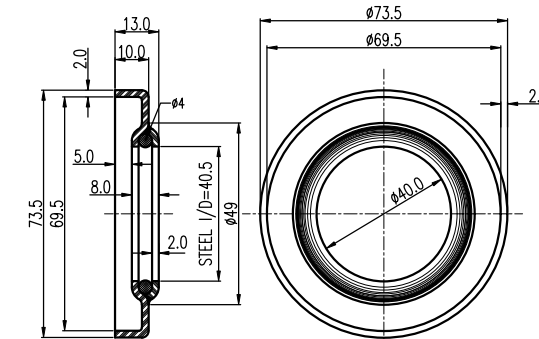
- NOTES :-
1. ALL DIMENSIONS ARE IN mm ONLY
  2. ALL DIAMETERS ARE CONCENTRIC TO EACH OTHER & REMOVE ALL SHARP EDGES.
  3. ALLOWABLE DEVIATIONS FOR DIMENSIONS WITHOUT SPECIFIED TOLERANCES AS PER IS:2102 (FINE)
  4. ALL ITEMS SHOULD BE FREE FROM ALL CRACK & OTHER DEFECTS.

Item no.	Description	Qty.	Material	Remarks
5	OIL SEAL RING	1	NYTRILE RUBBER	MOULDED
4	OIL INLET SIDE COVER	1	ANODIZED NICKEL PLATED MILD STEEL	PRESSED TO SHAPE
3	PERFORATED PLATE	1	ANODIZED NICKEL PLATED MILD STEEL	PUNCHED HOLE & ROLLED TO ROUND
2	FILTER FILAMENT	1	SS-316 ; NET 25 MICRON MESH	WOVEN FOR 25 MICRON NET
1	BLIND COVER	1	ANODIZED NICKEL PLATED MILD STEEL	PRESSED TO SHAPE

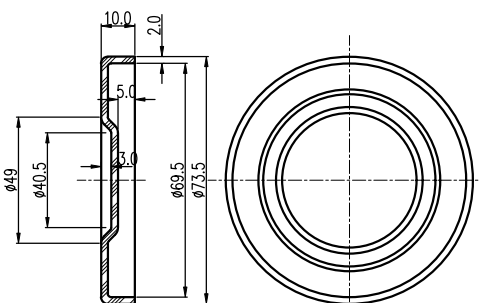
NALCO P.O. No T&C/AR/03/6GR-2539/W-2533		CRG DEPT.	PREPARED BY:	DESIGN CRAFTS INDIA
DRN SEKHAR	TITLE	BM 701 RECIRCULATION		ITEM REF No
CKD G B NAYAK		FILTER		SCALE: 1 : 1.5
CKD SHIV SHANKAR SAW		Area 02		TOT SHT 1 SHT No 1
APD D. BEHERA		NATIONAL ALUMINIUM CO LTD. DAMANJODI		DRG. No. NALCO/MECH/MECH/6184 0



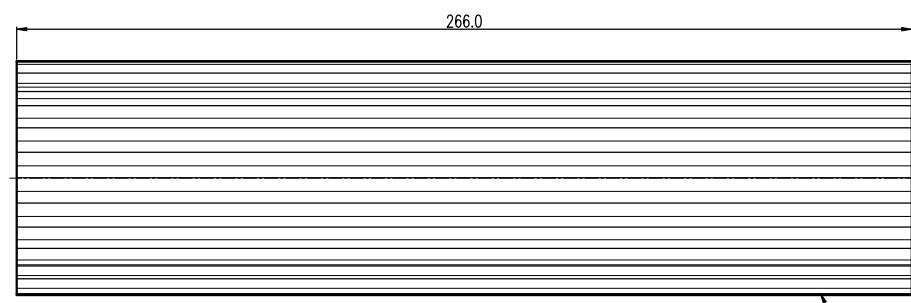
ASSY OF FILTER FILAMENT (BM 1001-1002 LP DISCHARGE FILTER)



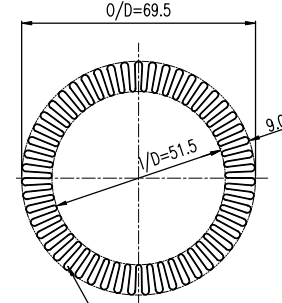
OIL INLET SIDE COVER ④



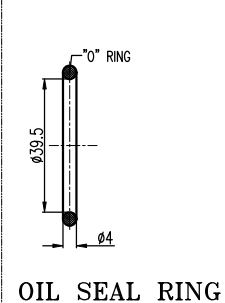
BLIND COVER ①



FILTER FILAMENT NET ②

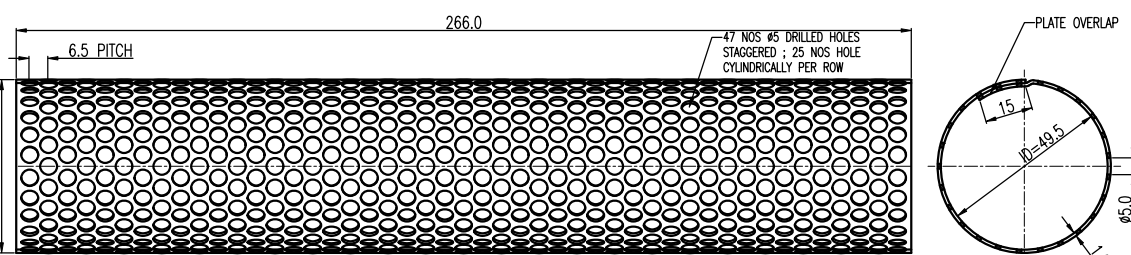


PERFORATED PLATE ③



OIL SEAL RING ⑤

FILAMENT CIRCULAR BEND =52 NOS  
FILAMENT MESH=25 MICRON  
OIL INLET PRESSURE=  
FLOW RATE PER HOUR=



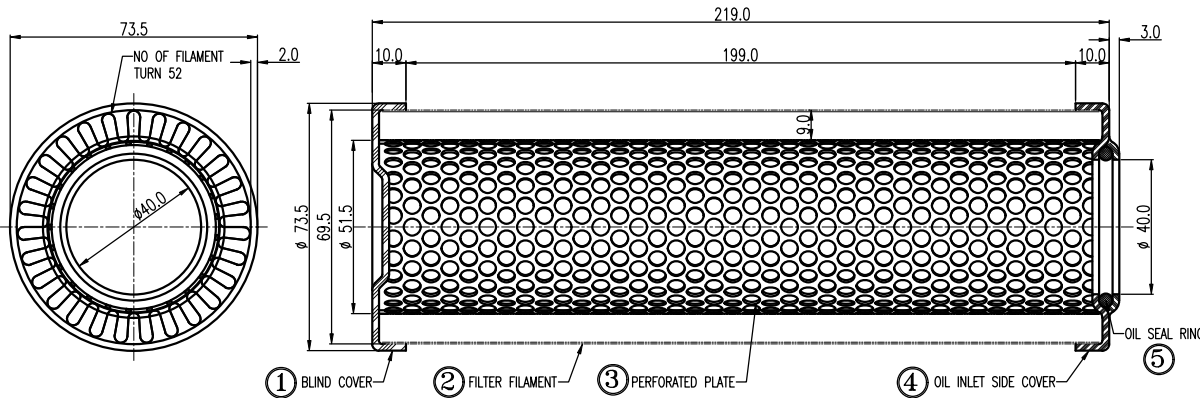
Item no.	Description	Qty.	Material	Remarks
5	OIL SEAL RING	1	NYTRILE RUBBER	MOULDED
4	OIL INLET SIDE COVER	1	ANODIZED NICKEL PLATED MILD STEEL	PRESSED TO SHAPE
3	PERFORATED PLATE	1	ANODIZED NICKEL PLATED MILD STEEL	PUNCHED HOLE & ROLLED TO ROUND
2	FILTER FILAMENT	1	SS-316 ; NET 25 MICRON MESH	WOVEN FOR 25 MICRON NET
1	BLIND COVER	1	ANODIZED NICKEL PLATED MILD STEEL	PRESSED TO SHAPE

CLASS OF SURFACE FINISH	ALLOWABLE DEVIATIONS FOR DIMENSIONS WITHOUT SPECIFIED TOLERANCES IS:2102											
	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12
COARSE	± 0.4	± 0.5	± 0.6	± 0.7	± 0.8	± 0.9	± 1.0	± 1.1	± 1.2	± 1.3	± 1.4	± 1.5
MEDIUM	± 0.3	± 0.4	± 0.5	± 0.6	± 0.7	± 0.8	± 0.9	± 1.0	± 1.1	± 1.2	± 1.3	± 1.4
FINE	± 0.2	± 0.3	± 0.4	± 0.5	± 0.6	± 0.7	± 0.8	± 0.9	± 1.0	± 1.1	± 1.2	± 1.3
EXTRA FINE	± 0.1	± 0.2	± 0.3	± 0.4	± 0.5	± 0.6	± 0.7	± 0.8	± 0.9	± 1.0	± 1.1	± 1.2

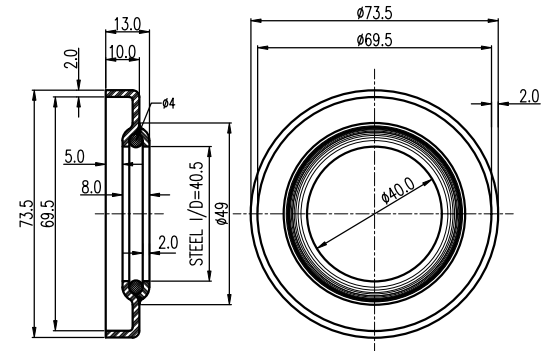
NOTES :-

1. ALL DIMENSIONS ARE IN mm ONLY
2. ALL DIAMETERS ARE CONCENTRIC TO EACH OTHER & REMOVE ALL SHARP EDGES.
3. ALLOWABLE DEVIATIONS FOR DIMENSIONS WITHOUT SPECIFIED TOLERANCES AS PER IS:2102 (FINE)
4. ALL ITEMS SHOULD BE FREE FROM ALL CRACK & OTHER DEFECTS.

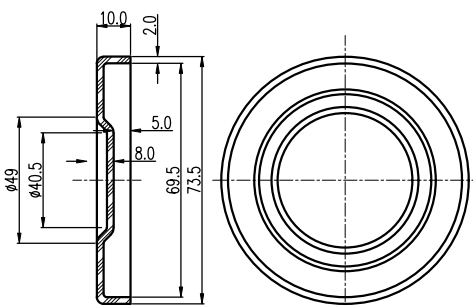
Item no.		Description	Qty.	Material	Remarks
NALCO P.O. NO T&C/AR/03/eGR-2539/W-2533		CRG DEPT.	PREPARED BY:-	DESIGN CRAFTS INDIA	
DRN SEKHAR				DAMANJODA ; BALLETURU ; HOWRAH-711118	
CKD G B NAYAK				TITLE <b>BM 1001/1002</b>	
CKD SHIV SHANKAR SAW				ITEM REF No	
APD D. BEHERA				SCALE: 1 : 1.5	
				Area 02	
NATIONAL ALUMINIUM CO LTD. DAMANJODI		DRG. No.		REV	
		NALCO/MECH/MISC/6186		0	



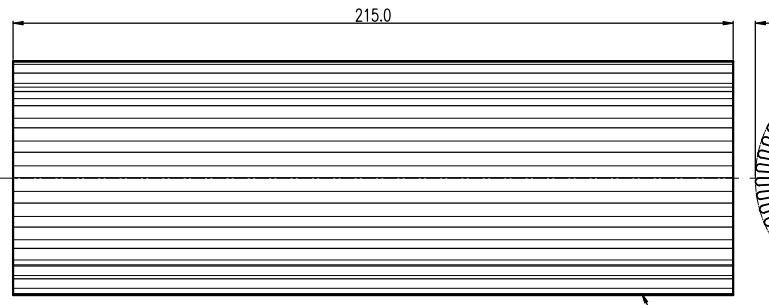
ASSY OF FILTER FILAMENT (BM 1001-1002 HP DISCHARGE FILTER)



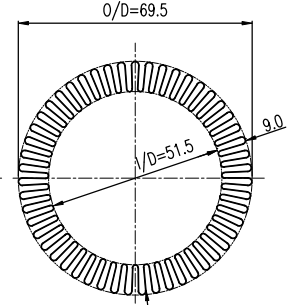
OIL INLET SIDE COVER ④



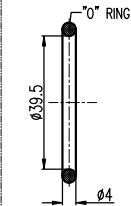
BLIND COVER ①



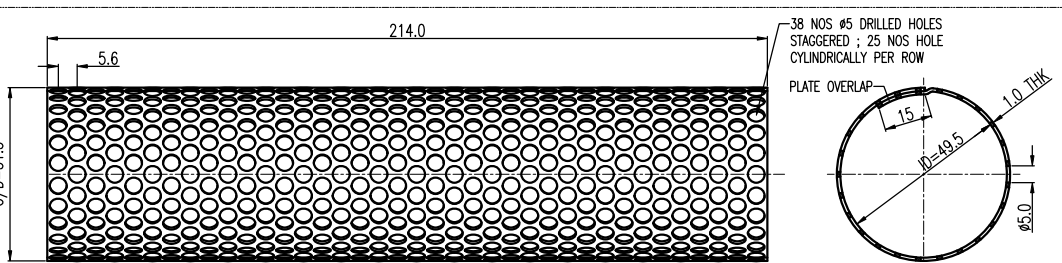
FILTER FILAMENT NET ②



FILAMENT MESH=25 MICRON  
OIL INLET PRESSURE=  
FLOW RATE PER HOUR=



OIL SEAL RING ⑤



PERFORATED PLATE ③

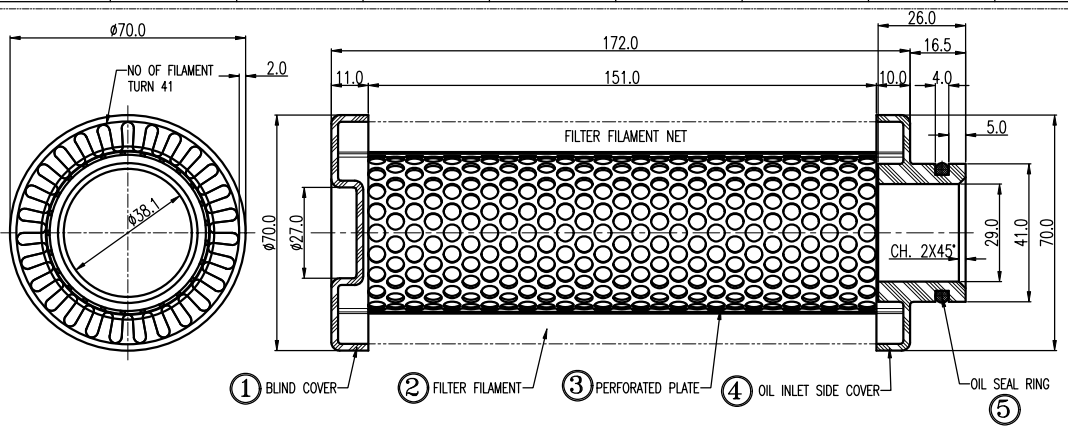
CLASS OF DEVIATION	ALLOWABLE DEVIATIONS FOR DIMENSIONS WITHOUT SPECIFIED TOLERANCES IS:2102											
	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12
ABOVE	0.5	3	6	30	120	315	1000	2000	4000	8000	12000	16000
BELOW	0.05	0.05	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.4	12.8	25.6
FINISH	± 0.02	± 0.02	± 0.02	± 0.04	± 0.08	± 0.16	± 0.32	± 0.64	± 1.28	± 2.56	± 5.12	± 10.24
MEDIUM	± 0.04	± 0.04	± 0.04	± 0.08	± 0.16	± 0.32	± 0.64	± 1.28	± 2.56	± 5.12	± 10.24	± 20.48
COARSE	± 0.08	± 0.08	± 0.08	± 0.16	± 0.32	± 0.64	± 1.28	± 2.56	± 5.12	± 10.24	± 20.48	± 40.96
EXTRA COARSE	± 0.16	± 0.16	± 0.16	± 0.32	± 0.64	± 1.28	± 2.56	± 5.12	± 10.24	± 20.48	± 40.96	± 81.92

NOTES :-

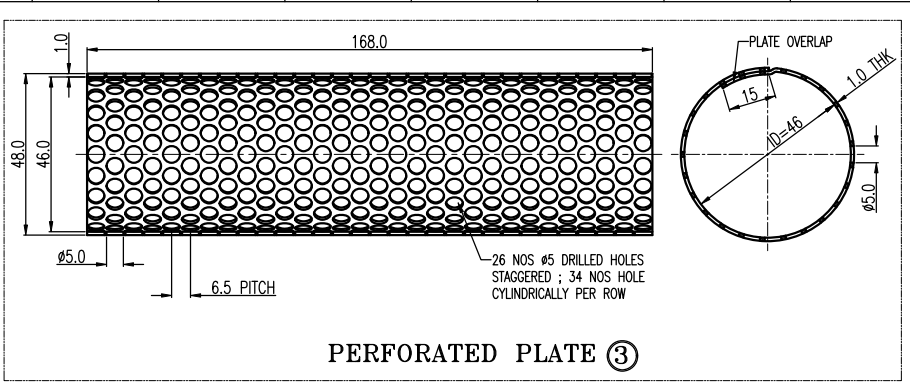
1. ALL DIMENSIONS ARE IN mm ONLY
2. ALL DIAMETERS ARE CONCENTRIC TO EACH OTHER & REMOVE ALL SHARP EDGES.
3. ALLOWABLE DEVIATIONS FOR DIMENSIONS WITHOUT SPECIFIED TOLERANCES AS PER IS:2102 (FINE)
4. ALL ITEMS SHOULD BE FREE FROM ALL CRACK & OTHER DEFECTS.

Item no.	Description	Qty.	Material	Remarks
5	OIL SEAL RING	1	NYTRILE RUBBER	MOULDED
4	OIL INLET SIDE COVER	1	ANODIZED NICKEL PLATED MILD STEEL	PRESSED TO SHAPE
3	PERFORATED PLATE	1	ANODIZED NICKEL PLATED MILD STEEL	PUNCHED HOLE & ROLLED TO ROUND
2	FILTER FILAMENT	1	SS-316 ; NET 25 MICRON MESH	WOVEN FOR 25 MICRON NET
1	BLIND COVER	1	ANODIZED NICKEL PLATED MILD STEEL	PRESSED TO SHAPE

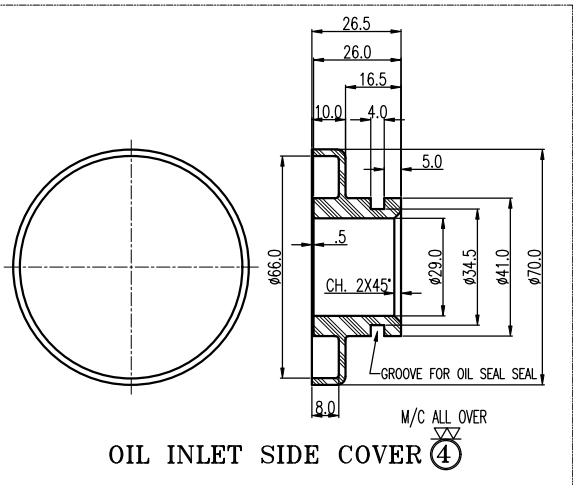
Item no.	Description	Qty.	Material	Remarks
<p>NALCO P.O. NO T&amp;C/AR/03/eGR-2539/W-2533</p> <p>CRG DEPT. PREPARED BY:-  DESIGN CRAFTS INDIA DAMANJODI ; BALETHURU ; HOWRAH-711118</p> <p>DRN SEKHAR  TITLE BM1001/1002 HP DISCHARGE FILTER ITEM REF No</p> <p>CKD G B NAYAK  SCALE: 1 : 1.5</p> <p>CKD SHIV SHANKAR SAW  AREA 02</p> <p>APD D. BEHERA  TOT SHT 1 SHT No 1</p> <p> NATIONAL ALUMINIUM CO LTD. DRG. No. NALCO/MECH/MISC/6187</p> <p>DAMANJODI</p>				
				REV 0



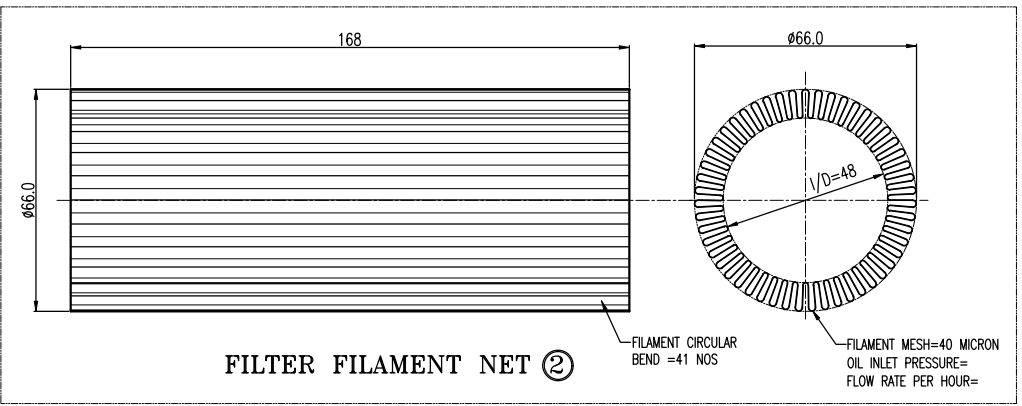
ASSY OF FILTER FILAMENT (BM 701 GEAR BOX FILTER)



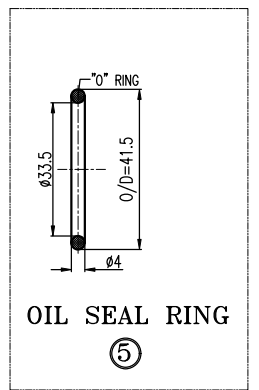
PERFORATED PLATE (3)



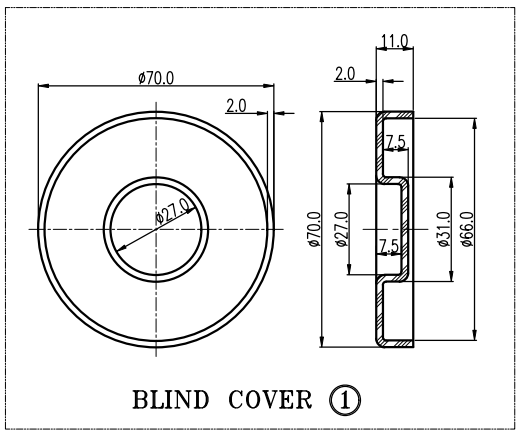
OIL INLET SIDE COVER (4)



FILTER FILAMENT NET (2)



OIL SEAL RING (5)



BLIND COVER (1)

NOTES :-

- ALL DIMENSIONS ARE IN mm ONLY
- ALL DIAMETERS ARE CONCENTRIC TO EACH OTHER & REMOVE ALL SHARP EDGES.
- ALLOWABLE DEVIATIONS FOR DIMENSIONS WITHOUT SPECIFIED TOLERANCES AS PER IS:2102 (FINE)
- ALL ITEMS SHOULD BE FREE FROM ALL CRACK & OTHER DEFECTS.

CLASS OF DEVIATION	DEVIATIONS FOR LINEAR DIMENSIONS											
	0.5	1	2	3	4	5	6	8	10	12	15	20
EXTRA COARSE	± 0.15	± 0.20	± 0.25	± 0.30	± 0.35	± 0.40	± 0.45	± 0.50	± 0.55	± 0.60	± 0.65	± 0.70
COARSE	± 0.20	± 0.25	± 0.30	± 0.35	± 0.40	± 0.45	± 0.50	± 0.55	± 0.60	± 0.65	± 0.70	± 0.75
MEDIUM	± 0.25	± 0.30	± 0.35	± 0.40	± 0.45	± 0.50	± 0.55	± 0.60	± 0.65	± 0.70	± 0.75	± 0.80
FINE	± 0.30	± 0.35	± 0.40	± 0.45	± 0.50	± 0.55	± 0.60	± 0.65	± 0.70	± 0.75	± 0.80	± 0.85
VERY FINE	± 0.35	± 0.40	± 0.45	± 0.50	± 0.55	± 0.60	± 0.65	± 0.70	± 0.75	± 0.80	± 0.85	± 0.90

Item no.	Description	Qty.	Material	Remarks
5	OIL SEAL RING	1	NYTRILE RUBBER	MOULDED
4	OIL INLET SIDE COVER	1	ANODIZED NICKEL PLATED MILD STEEL	PRESSED TO SHAPE
3	PERFORATED PLATE	1	ANODIZED NICKEL PLATED MILD STEEL	PUNCHED HOLE & ROLLED TO ROUND
2	FILTER FILAMENT	1	SS-316 ; NET 40 MICRON MESH	WOVEN FOR 40 MICRON NET
1	BLIND COVER	1	ANODIZED NICKEL PLATED MILD STEEL	PRESSED TO SHAPE

NALCO P.O. NO T&C/AR/03/eGR-2539/W-2533		CRG DEPT.	PREPARED BY:-	DESIGN CRAFTS INDIA
DRN SEKHAR				NANKARPADA ; DALYETKURE ; BOWRAH-711118
CKD G B NAYAK			TITLE	ITEM REF No
CKD SHIV SHANKAR SAW			BM 701 GEAR BOX FILTER	SCALE: 1 : 1.5
APD D. BEHERA			Area 02	TOT SHT 1 SHT No 1
NATIONAL ALUMINIUM CO LTD. DAMANJODI			DRG. No.	REV
			NALCO/MECH/MISC/6188	0