

PCS-07-01

[illegible]

PCS - 071-01

SHEET: 1 of 4.

1. 1-BACH.
2. PAINT ~~THE~~ BLACK
3. DECALS.

Ø3/8 QUICK CONNECT

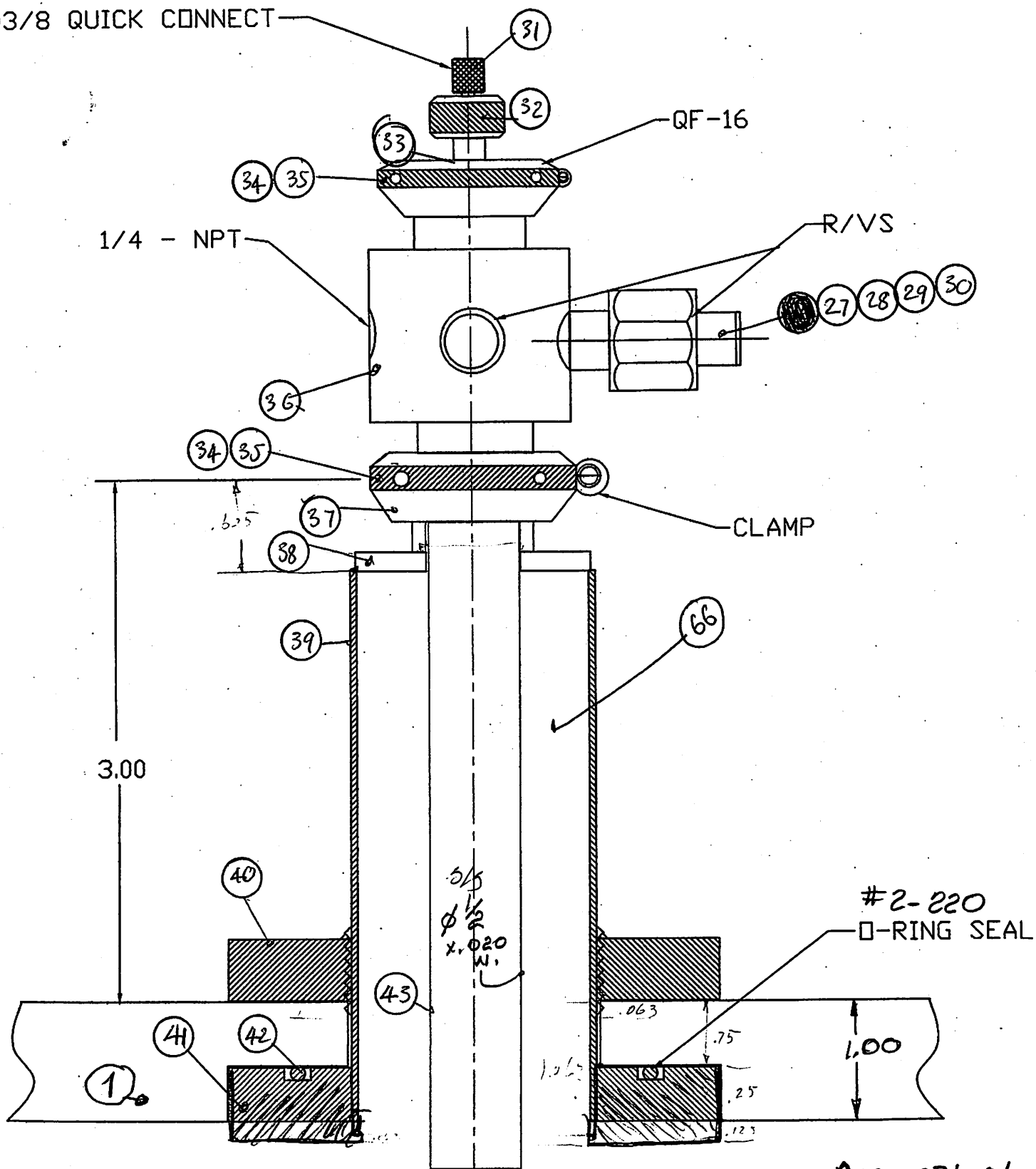
1/4 - NPT

QF-16

R/VS

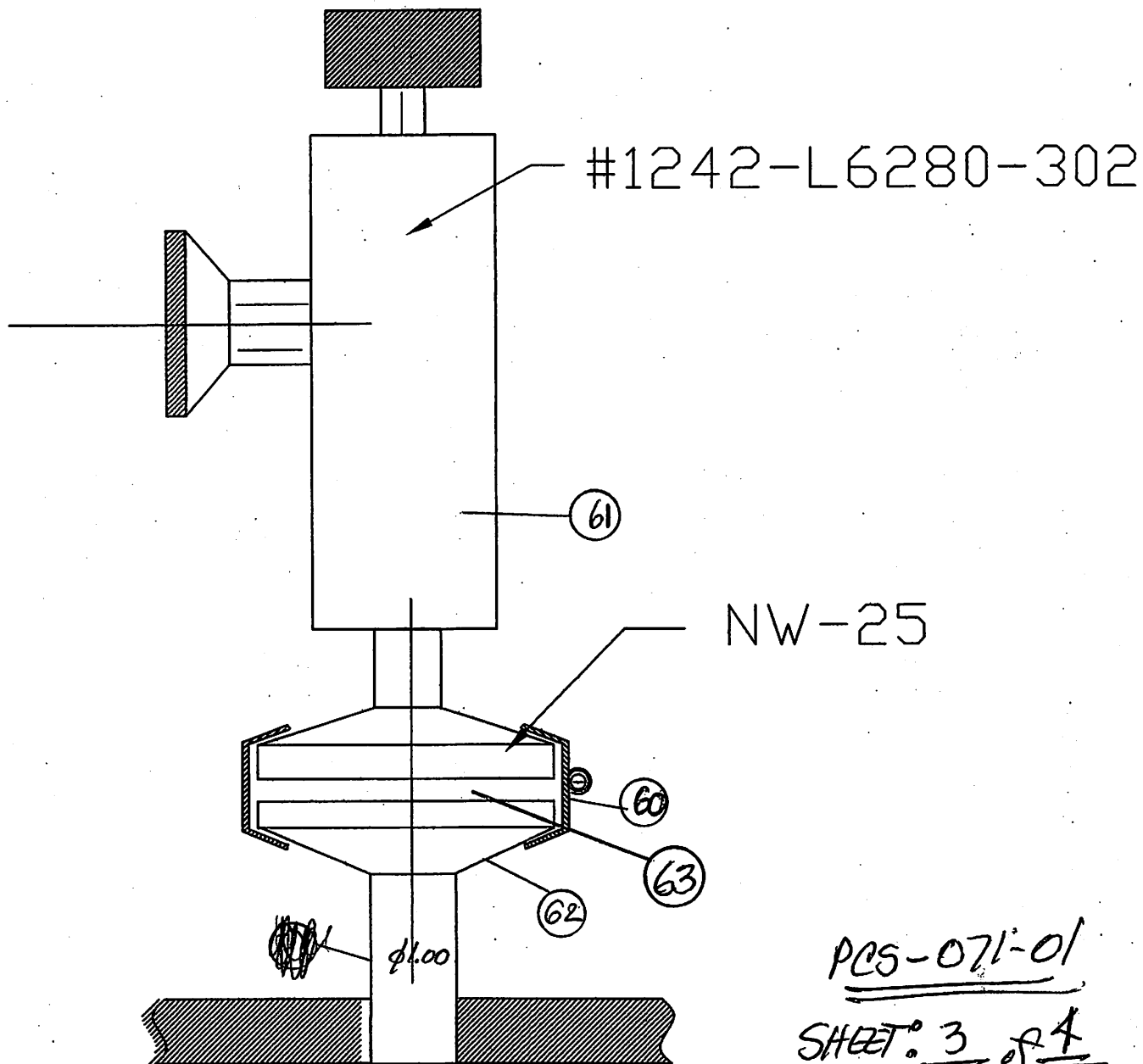
CLAMP

#2-220
O-RING SEAL



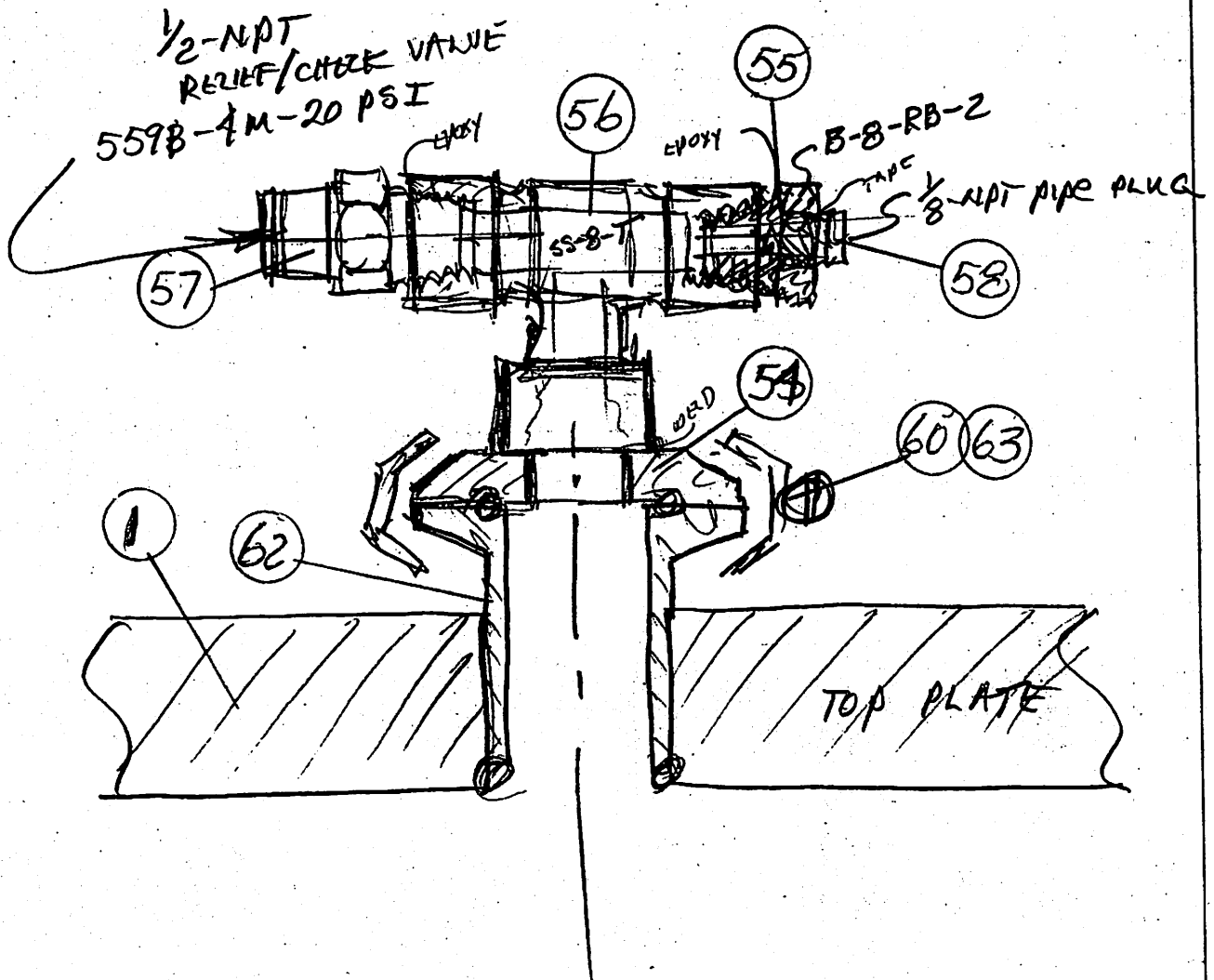
LN2 FILL PORT DETAIL

PCS-071-01
SHEET 2 of 4



PCS-071-01
SHEET: 3 of 4

DEWAR EVACUATION



VACUUM RELIEF PORT

PCS-071-01

SHEET: 4 of 4

MATERIAL LIST

DRAWING NO. 061501

MODEL LN2-21/35

DUE DATES 08/10/01

SHEET 1 OF 3

CUSTOMER CORNELL UNIVERSITY

PCS-071-01 QTY. 1

ITEM NO.	DRAWING NO.	NO. REQ'D	DESCRIPTION	S-STOCK, M-MACHINE	F-FABRICATE P-PURCHASE
1	061501 - 1	✓ 1	TOP FLANGE (AL)	m	
2	- 2	✓ 2	OUTER CONNECTOR FLG (AL)	m	
3	- 3	✓ 1	UPPER NECK TUBE PLATE (AL)	m	
4	- 4	✓ 1	UPPER LN2 PLATE (AL)	m	
5	- 5	✓ 1	LOWER NECK TUBE PLATE (AL)	m	
6	- 6	✓ 1	UPPER LN2 FLG (AL)	m	
7	- 7	✓ 1	OUTER CONNECTOR FLANGE (AL)	m	
8	- 8	✓ 1	BOTTOM LN2 FLG (AL)	m	
9	- 9	✓ 1	BOTTOM NECK TUBE PLATE (AL)	m	
10	- 10	✓ 1	BOTTOM OUTER FLG (AL)	m	
11	- 11	✓ 1	BOTTOM WINDOW PLATE (AL)	m	
12	- 12	✓ 1	BOTTOM WINDOW FLANGE (AL)	m	
13	- 13	✓ 1	LOWER LN2 FLANGE (AL)	m	
14	- 14	✓ 1	LN2 WINDOW PLATE (AL)	m	
15	- 15	✓ 1	TOP WINDOW PLATE (AL)	m	
16	✓ - 16	✓ 1	CYLINDER ϕ 16.50 X .125 W (AL)	S/F	
17	✓ - 17	✓ 1	CYLINDER ϕ 19.00 X .188 W (AL)	S/F	
18	061501 - 18	✓ 1	TUBE ϕ 8.00 X $\frac{1}{8}$ " W. X LG. (AL)	S/F, M	
19	061501 - 19	✓ 1	CYLINDER ϕ 16.00 X .125 W (AL)	S/F	
20	061501 - 20	✓ 1	G-10 CYLINDER ϕ 16.870 X .06 W. (G-10)	S/P, F	SEE D.G. FOR PUNCH-OUT HOLES
21	061501 - 21	✓ 1	CYLINDER ϕ 19.00 X .19 W. (AL)	S/F	
22		✓ 1	O-RING # 2-238	S/P	
23		✓ 6	O-RING # 2-467	S/P	
24		✓ 1	O-RING # 2-265	S/P	
25	061501 - 25	✓ 1	BOTTOM LN2 CONNECTOR (AL)	m	

MATERIAL LIST

MODEL LN2-21/33.5

DUE DATES 08/10/01

DRAWING NO. 061501

SHEET 2 OF 3

CUSTOMER CORNELL UNIVERSITY

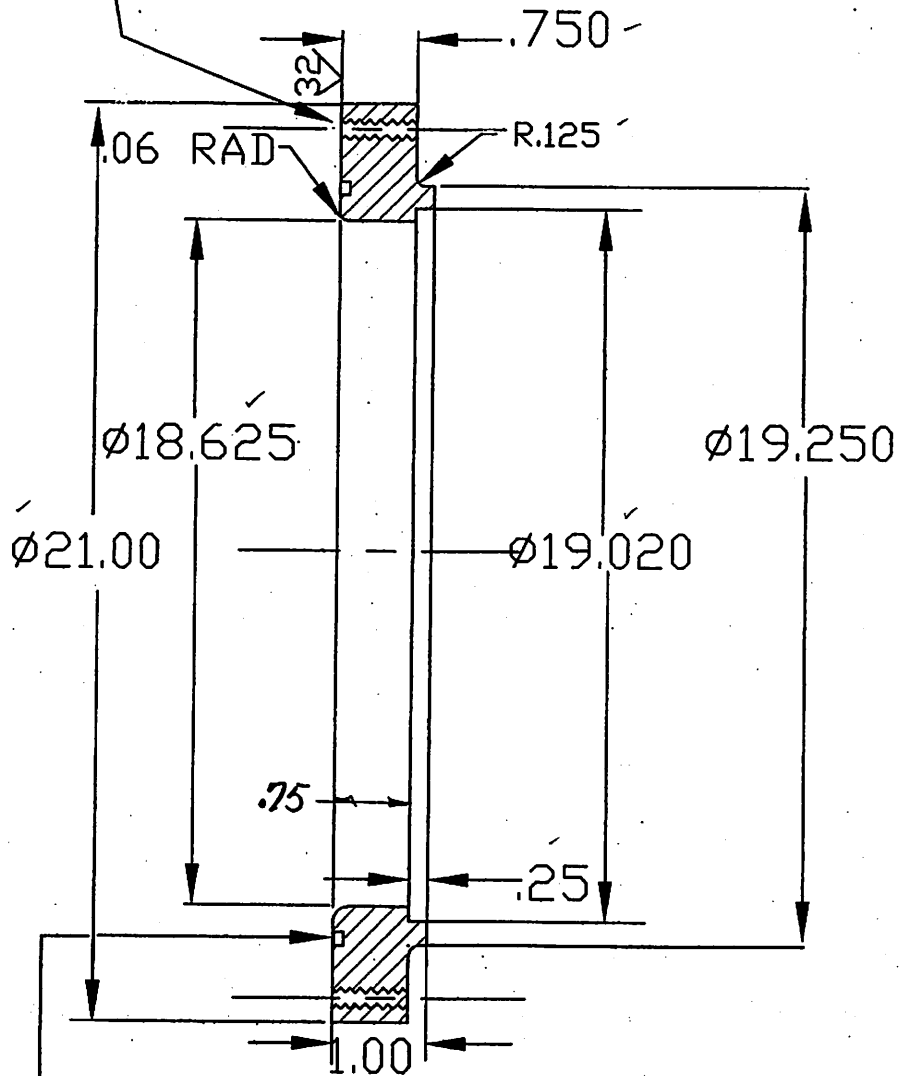
PCS-071-01 QTY. 1

ITEM NO.	DRAWING NO.	NO. REQ'D	DESCRIPTION	S-STOCK M-MACHINE	F-FABRICATE P-PURCHASE
26	OPEN				
27		✓ 1	559 B - 2M - 1 PSI RELIEF VALVE 1/4-NPT	S	
28		✓ 1	559 B - 2M - 4 PSI RELIEF VALVE 1/4-NPT	S	
29		✓ 1	559 B - 2M - 10PSI RELIEF VALVE 1/4-NPT	S	
30		✓ 1	1/4-NPT, 3-S PIPE PLUG	S	
31	061501 -31	✓ 1	# B38 - P PLUG	S, P	A & N
32	-32	✓ 1	# SB-38 - KM, VAC - COUPLING	p/m	A & N
33	-33	✓ 1	QF16 - B50, WELD FLANGE S/S	P	A & N
34	-34	✓ 2	QF-16-075 - BR-B, CR-RING	P	
35	061501-35	✓ 2	QF16 - 075 - CT ALUMINUM	P	A & N
36	061501-36	✓ 1	QF16 X 1/4 NPT - AT	P	A & N
37	061501-37	✓ 1	QF16-075 - SS (S/S)	P	A & N
38	061501-38	✓ 1	WASHER (S/S)	m	
39	-39	✓ 1	FILL-PORT, TUBE $\phi 1\frac{1}{4} \times 8$ W. (S/S)	m	
40	061501-40	✓ 1	FILL-PORT, NUT (BRASS)	m	
41	-41	✓ 1	FILL-PORT FLANGE (S/S)	m	
42		✓ 1	O-RING, #2-220	S	
43		✓ 1	$\phi 1\frac{1}{2}$ X .020 W. AS REQ'D LENGTH, SKINBE	S/E	
44		✓ 1	# 321-B-X-1, 1/2" I.D BELLOWS	P	IVF
45		✓ 64	# 1/4-20 SHCS X 1.25' LG (S/S)	S	
46		✓ 32	# 1/4-20 SHCS X 1.00' LG (S/S)	S	
47		✓ 48	# 10-32 SHCS X 7/8" LG (S/S)	S	
48					
49		✓ 8	# 8-32 SHCS X .50 LG (S/S)	S	
50		✓ 8	# 4-40 SHCS X .500 LG (S/S)	S	

DRAWING NO. 061501**MATERIAL LIST**MODEL LN2 - 2/33.5DUE DATES 08/10/01SHEET 3 OF 3CUSTOMER CORNELL UNIVERSITYPCS. 071-01 QTY. 1

ITEM NO.	DRAWING NO.	NO. REQ'D	DESCRIPTION	S-STOCK, M-MACHINE	F-FABRICATE P-PURCHASE
51		✓ 8	#6-32 X .50" LG. (S/S)	S	
52		✓ 24	#8-32 X .625" LG. (S/S)	S	
53		✓ 24	#10-32 X .63" LG. (S/S)	S	
54	061501-54	✓ 1	QF25-100-RF (S/S)	S/P	A & N
55	061501-55	✓ 1	B-8-RB-2, REDUCING BRUSHING PLUG (S/S) B	S/P	I V F
56	061501-56	✓ 1	SS-8-T, Female, 1/2-NPT	S/P	I V F
57		✓ 1	559B-4M-20 PSI, CHECK VALVE, 1/2-NPT (WALE)	S, P	
58		✓ 1	1/8-NPT PIPE PLUG	S	
59		✓ A/R	CHARCOAL		
60		-60 ✓ 2	QF25-100-CT CLAMP	S/P	A & N
61	061501-61	✓ 1	NW25, PART # 1242-LG280-302, BVC. VALVE	P, VARIAN	(1-800-882-7426)
62	061501-62	✓ 2	QF25-100-ALE (AL)	P	A & N
63	061501-63	✓ 2	QF25-100-BR-B centering RING	P	A & N
64	061501-64	✓ 3	LIFTING LUG, 3/8"-16, # 33045T81	P	W° MASTB-CARR
65	061501-65	✓ 1	ALCLAD WASHER A/S/S	M	
66		✓ A/R	SUPERINSULATION	S/F	
67					
68					
69					
70					
71					
72					
73					
74					
75					

#1/4-20 TAP X THRU
 -32-PLCS EQ, SPA ON
 A Ø20.250 B.C (Helicoil)

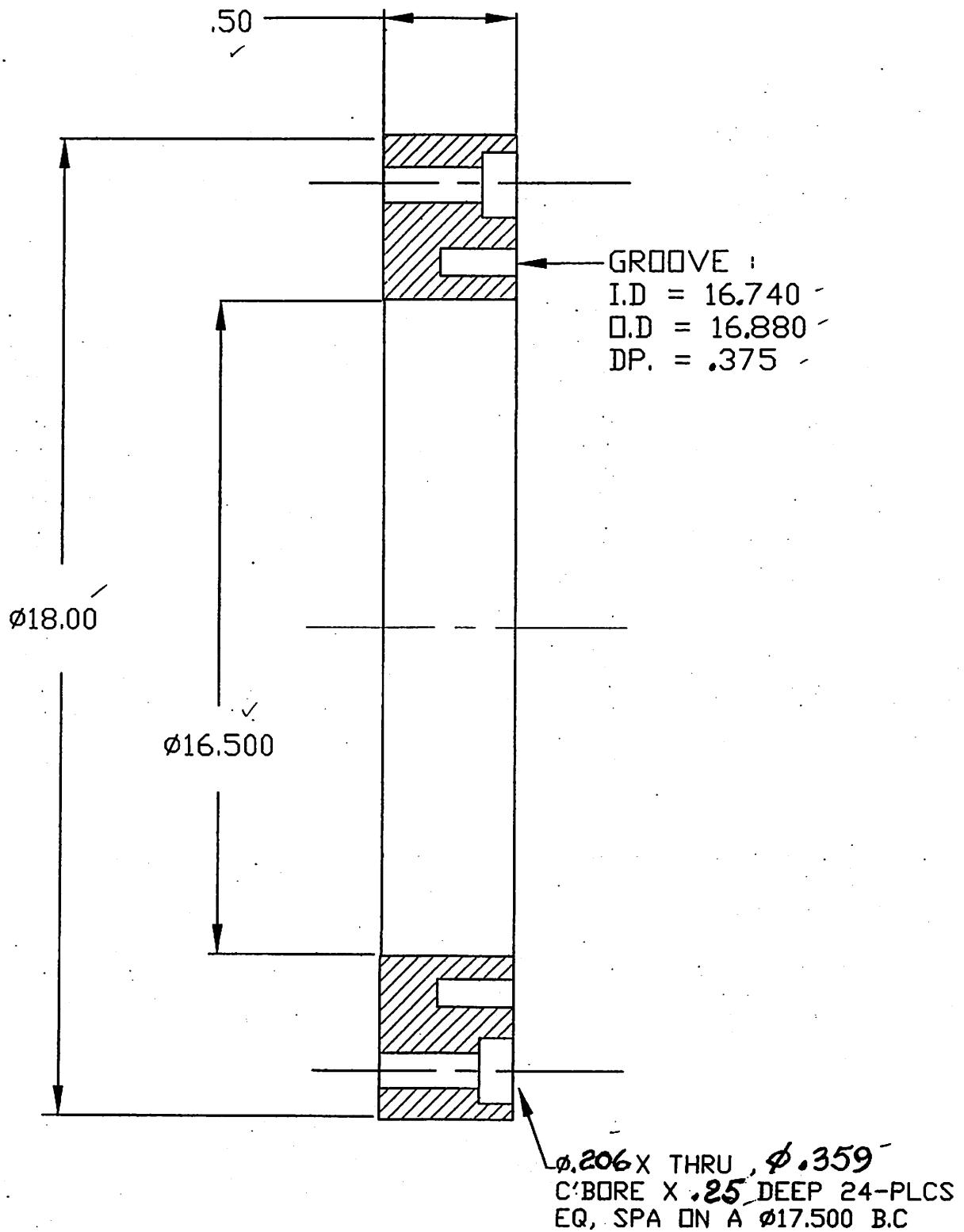


Ø-RING # 2-467 -
 I.D = 19.000 -
 W = .307 -
 DP. = .206 -

OUTER CONNECTOR FLG

MATL : ALUMINUM , Ø21.0 x 1.0" THK.
 QTY : 2- EACH

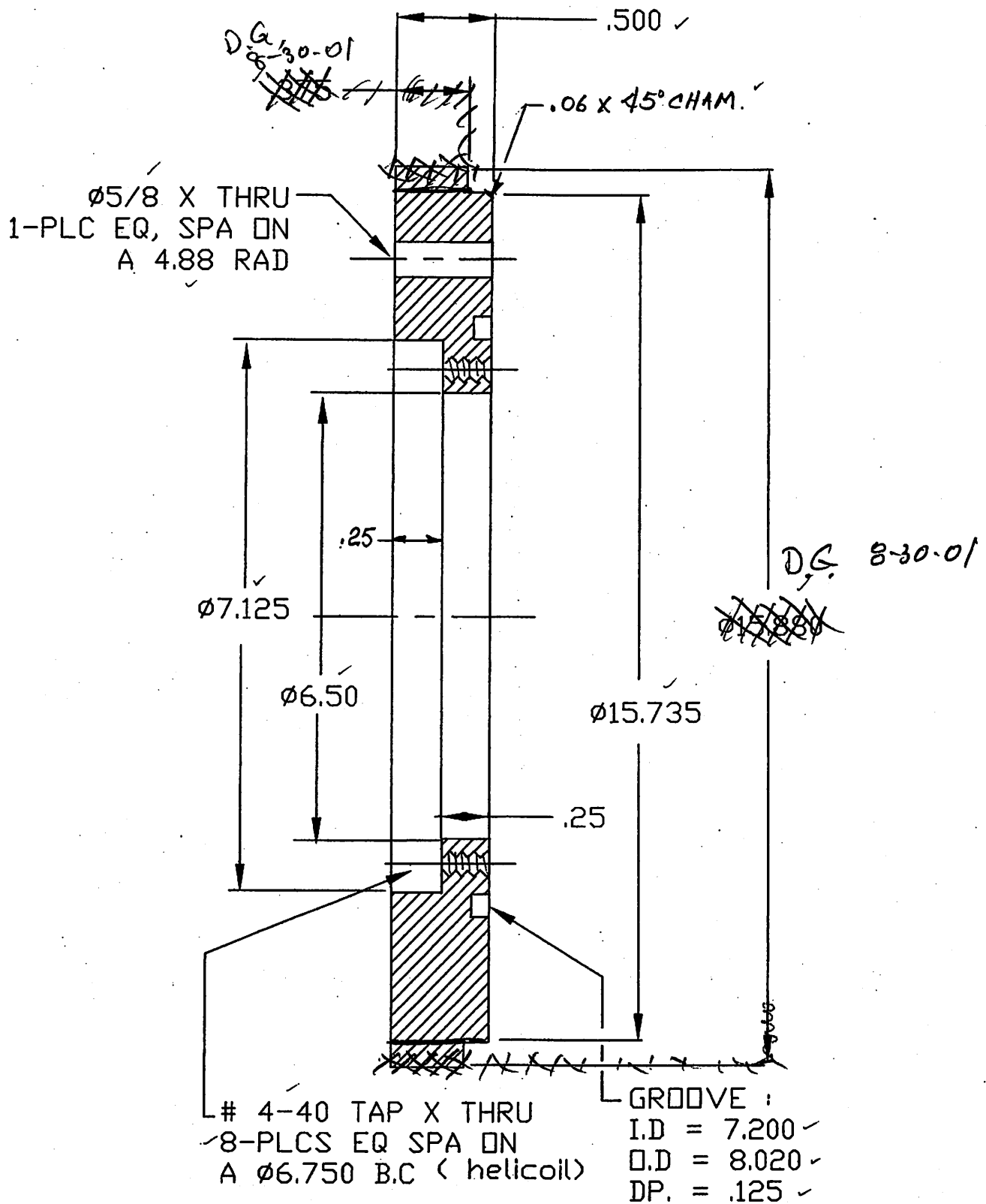
DWG : 061501-2
061501-2



TOP NECK TUBE FLANGE

MATL : ALUMINUM
QTY : 1 - EACH

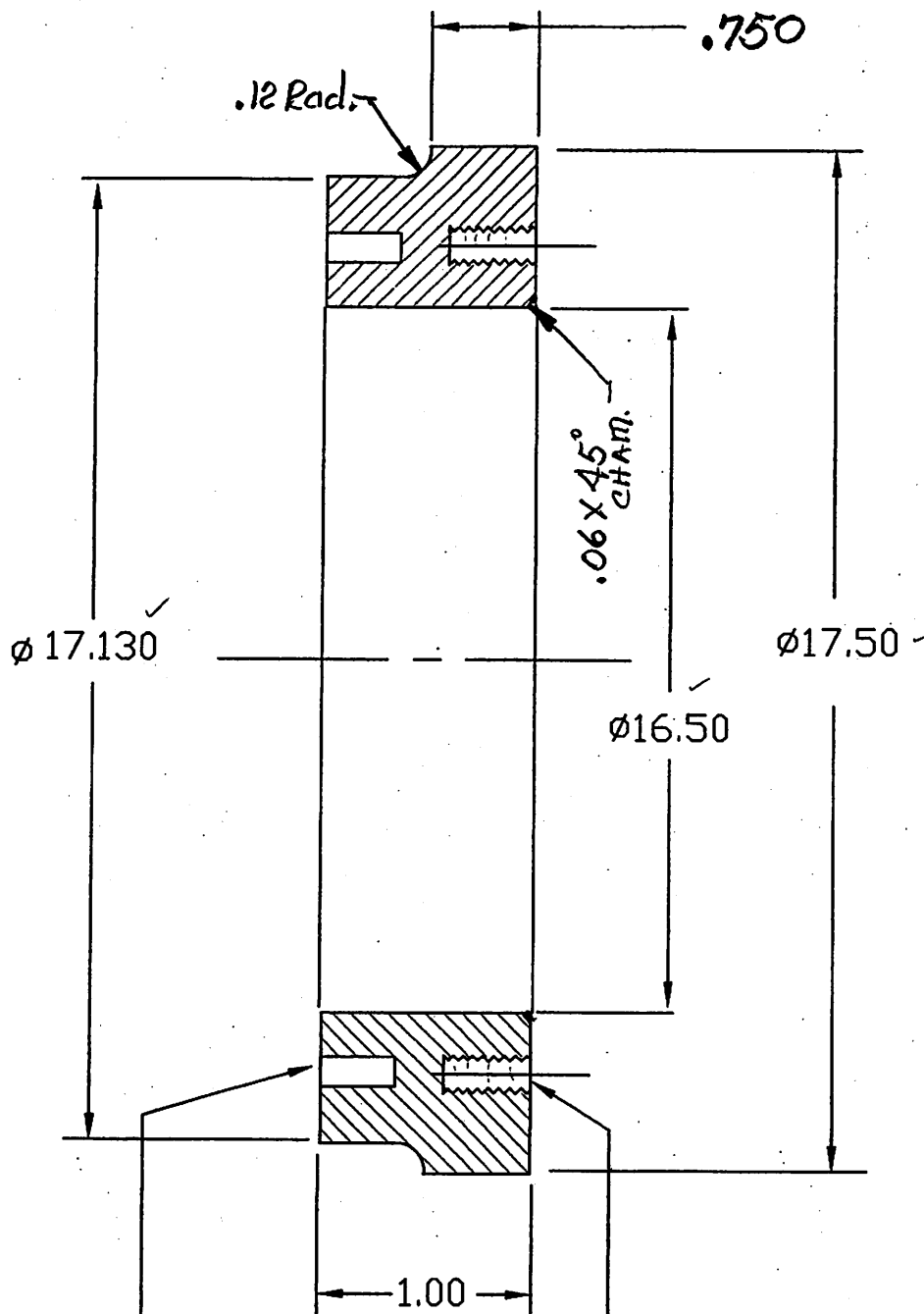
DWG : 061501-3
061501-3



UPPER LN2 PLATE

MATL : ALUMINUM
QTY : 1-EACH

DWG : 061501-4
061501-4



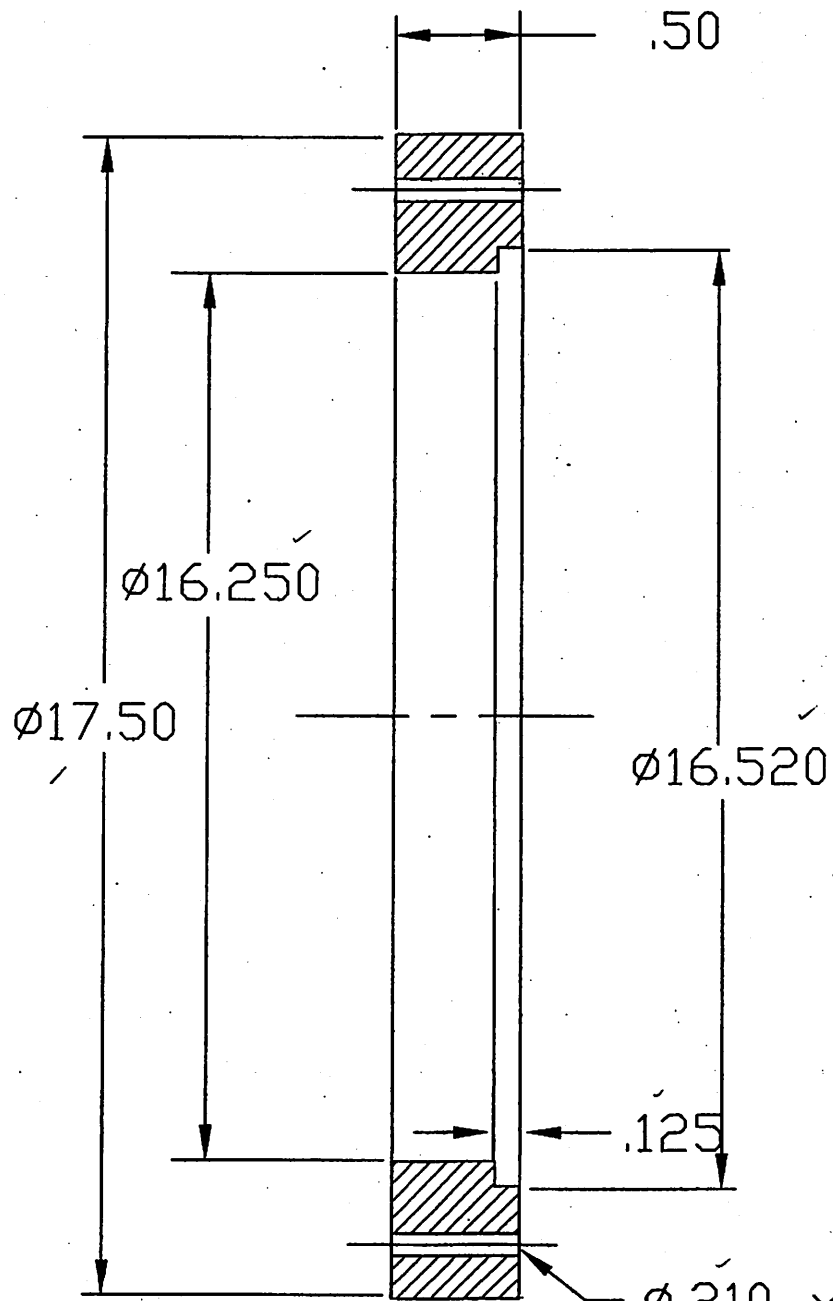
GROOVE :
 I.D = 16.740
 O.D = 16.880
 DP. = .375

#10-32 TAP X .500 DEEP
 24-PLCS EQ SPA DN A
 $\phi 17.00$ B.C (Helicoil)

LOWER NECK TUBE PLATE

MATL : ALUMINUM
 QTY : 1 -EACH

DWG : 061501-5
061501-5

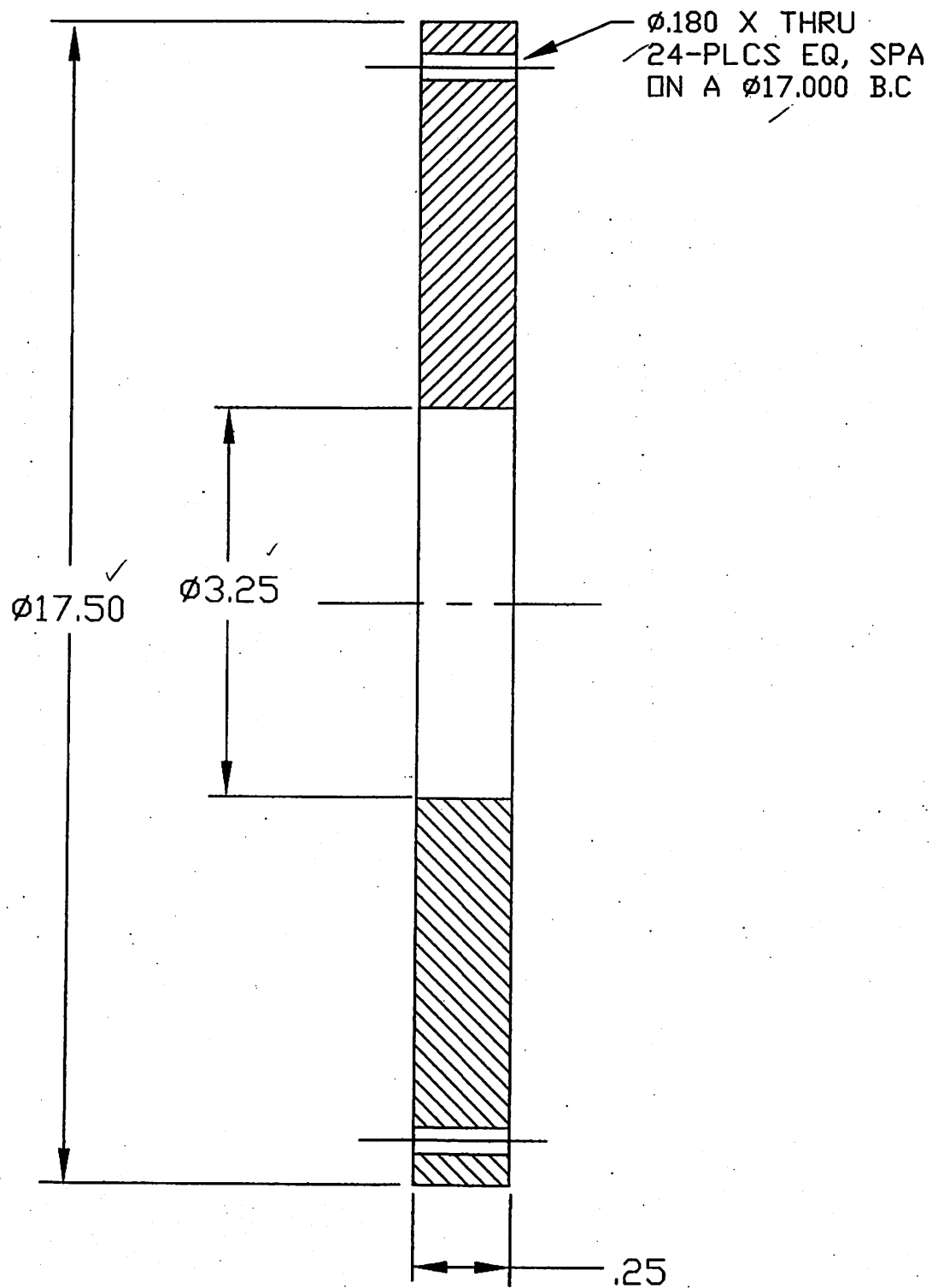


$\phi .210 \times$ THRU
 24-PLCS EQ, SPA
 ON A $\phi 17.000$ B.C

UPPER NECK TUBE FLANGE

MATL : ALUMINUM
 QTY : 1 - EACH

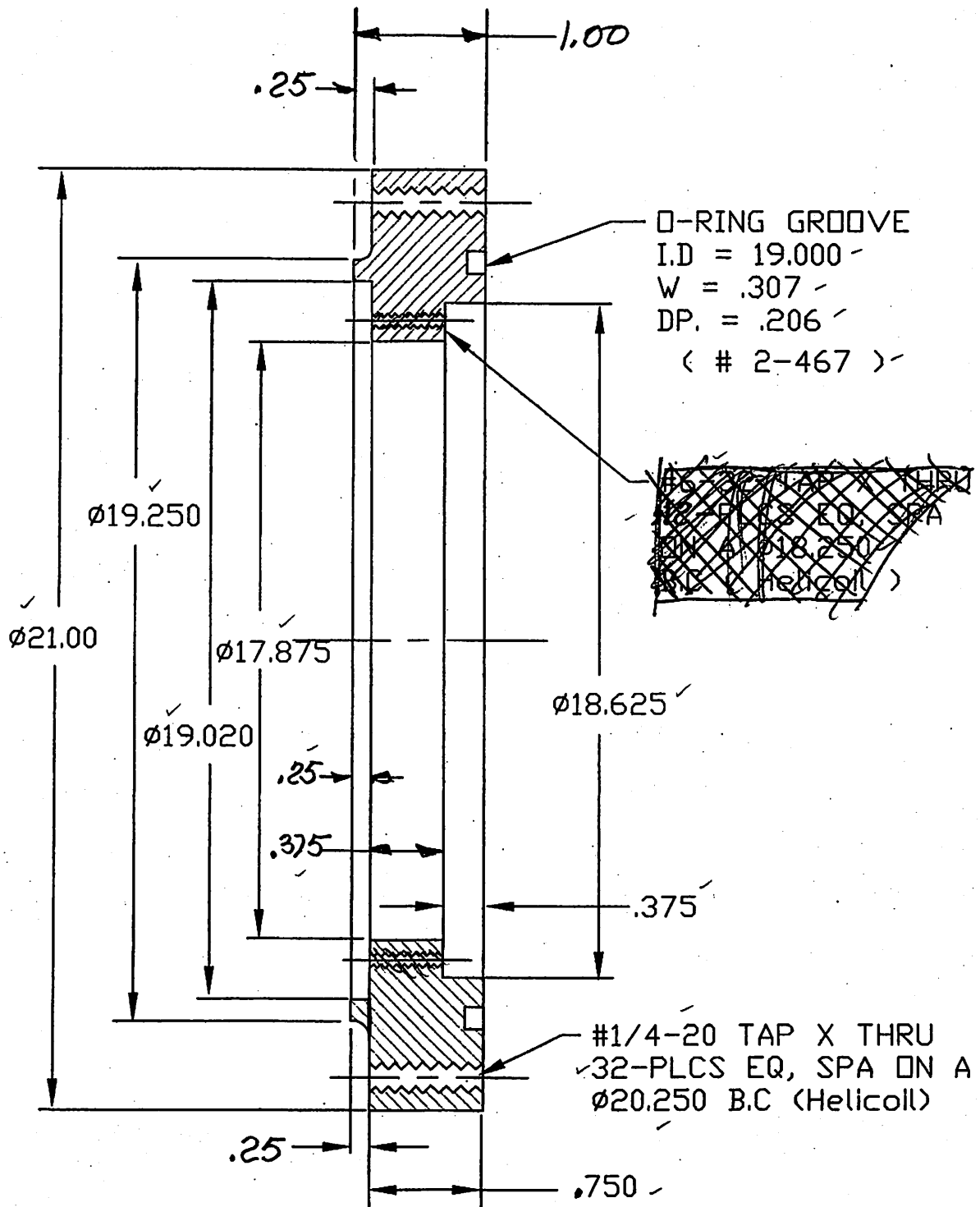
DWG :
 061501-6
 DWG : 061501-6



BOTTOM LN2 PLATE

MATL : ALUMINUM
QTY : 1 - EACH

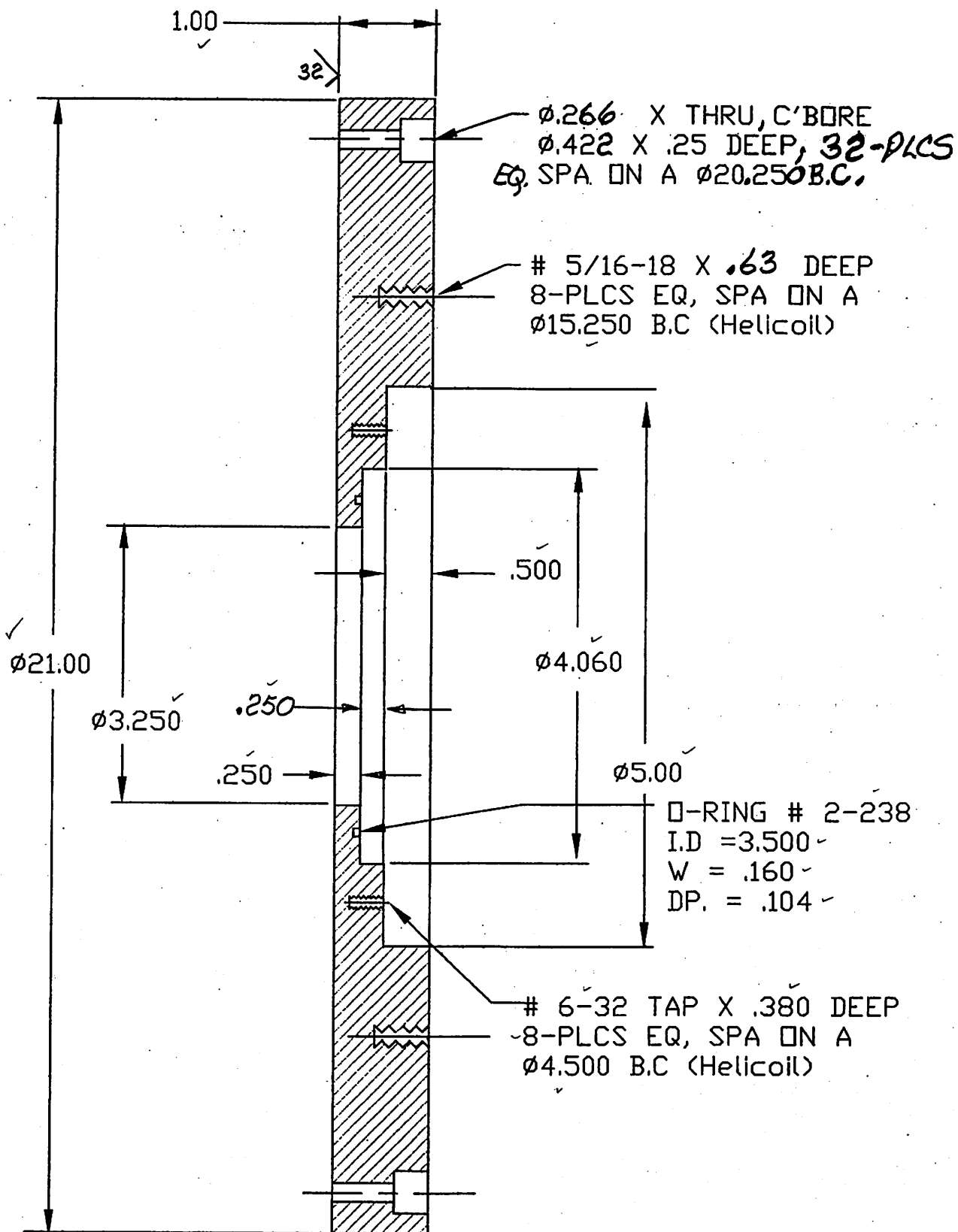
DWG : 061501-8
061501-8



BOTTOM OUTER NECK TUBE FLG

MATL : ALUMINUM
QTY : 1 - EACH

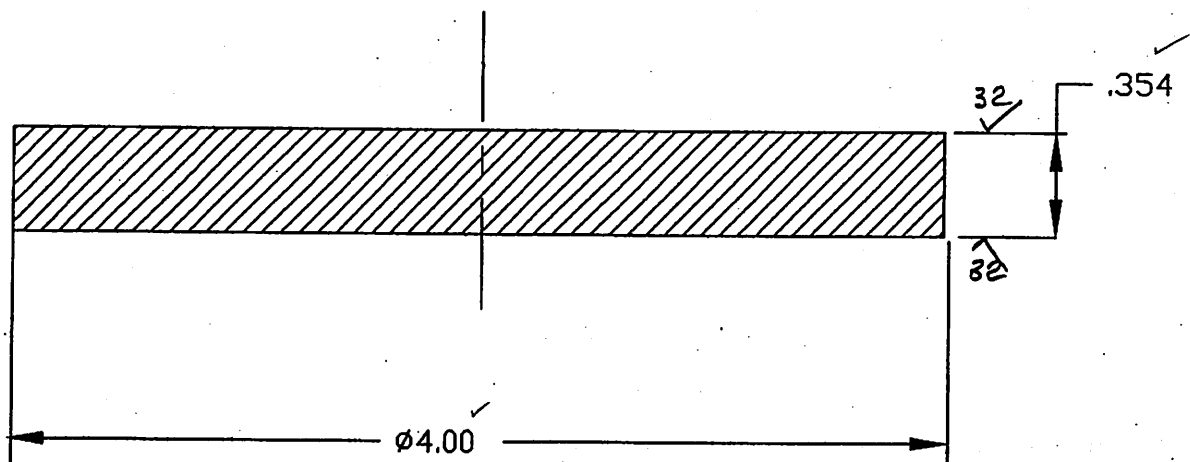
DWG : 061501-9
DWG : 061501-9



BOTTOM OUTER PLATE

MATL : ALUMINUM
QTY : 1 - EACH

DWG : 061501-10
061501-10

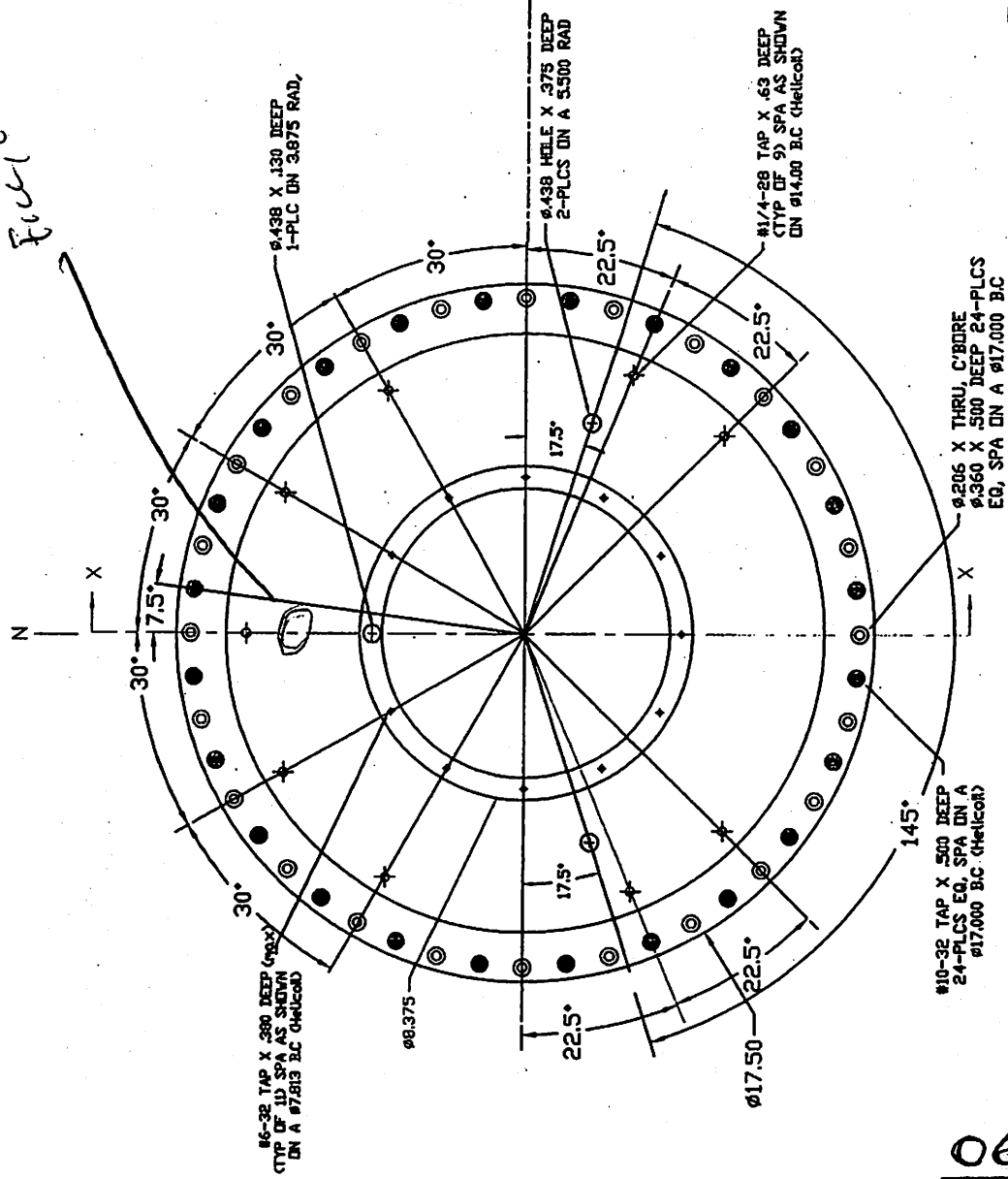


BOTTOM WINDOW PLATE

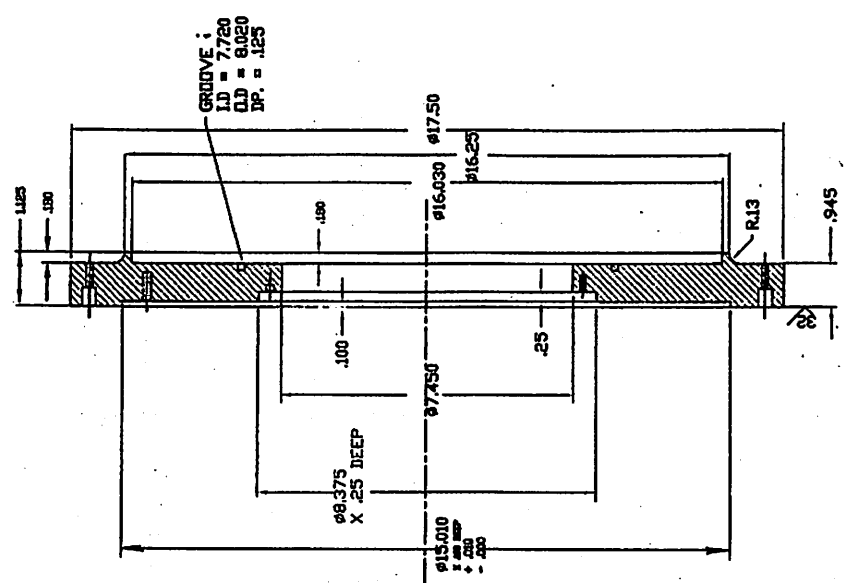
MATL : ALUMINUM
QTY : 1 -EACH

DWG : 061501-12
DWG : 061501-12

Full Port



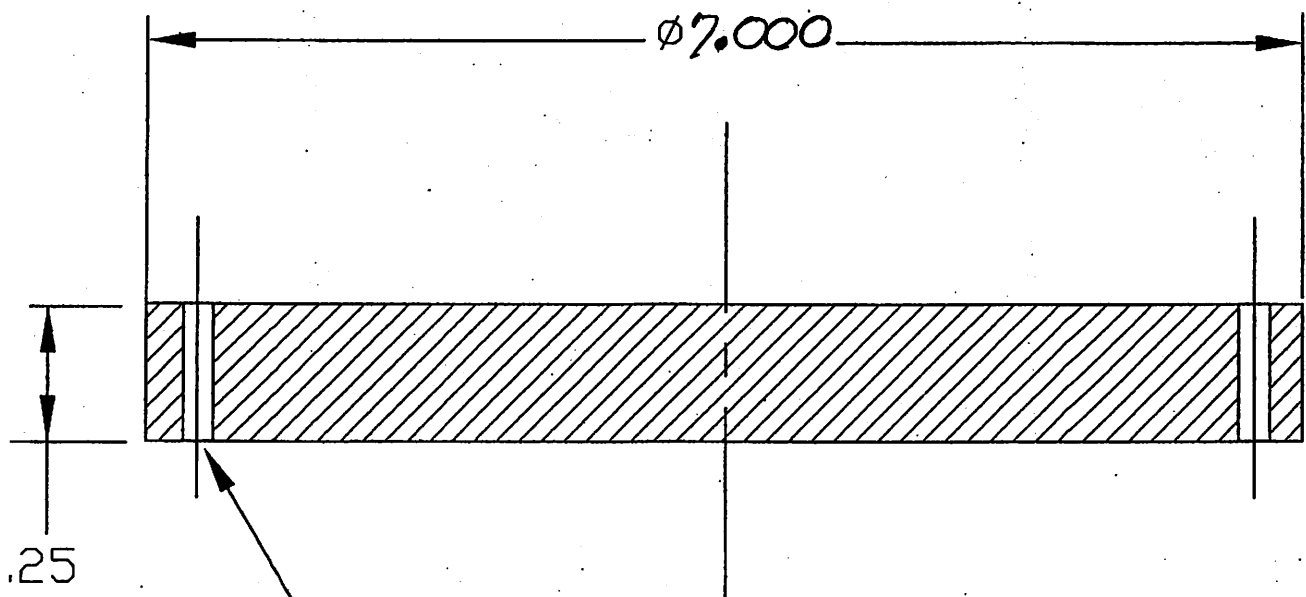
MATL : ALUMINUM
QTY : 1-EACH



Dewar Cold Plate
DWG : 061501-13

061501-13

061501-13



Ø.125 X THRU 8-PLCS
EQ, SPA ON A Ø6.750 B.C

LN2 WINDOW PLATE

MATL : ALUMINUM
QTY : 1 - EACH

DWG : 061501-14
061501-14

Technical drawing of a shaft. The central section has a diameter of $\phi 8.940$ and a length of 8.940 . The ends of the shaft are flanged with a thickness of 0.470 and a diameter of 32 . The central section is hatched.

TOP COVER WINDOW PLATE

MATL : ALUMINUM
QTY : 1 - EACH

DWG :

DWG : 061501-15

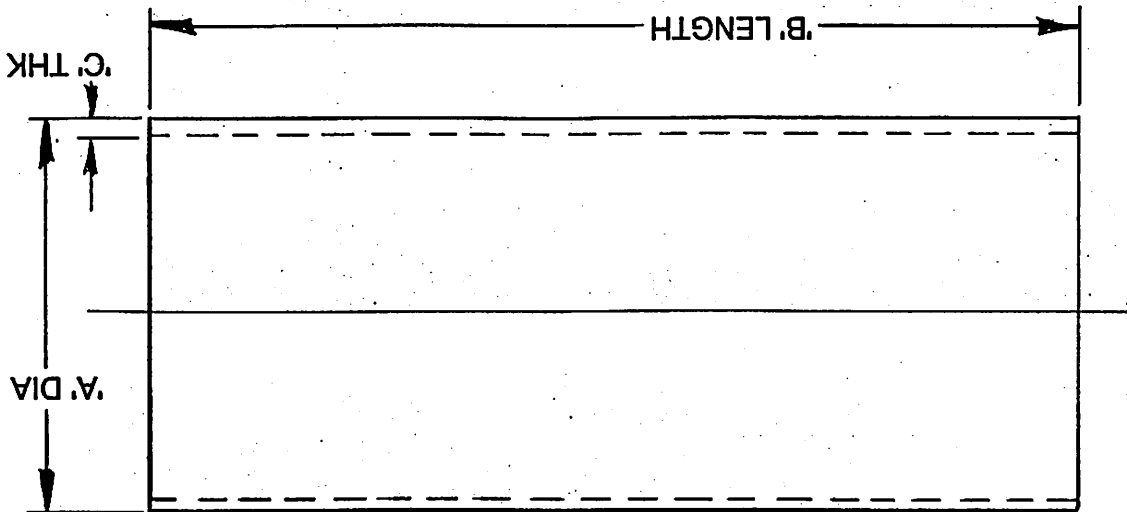
DETAIL NO. : 061501 - 16, 17, 18, 19, 20, 21

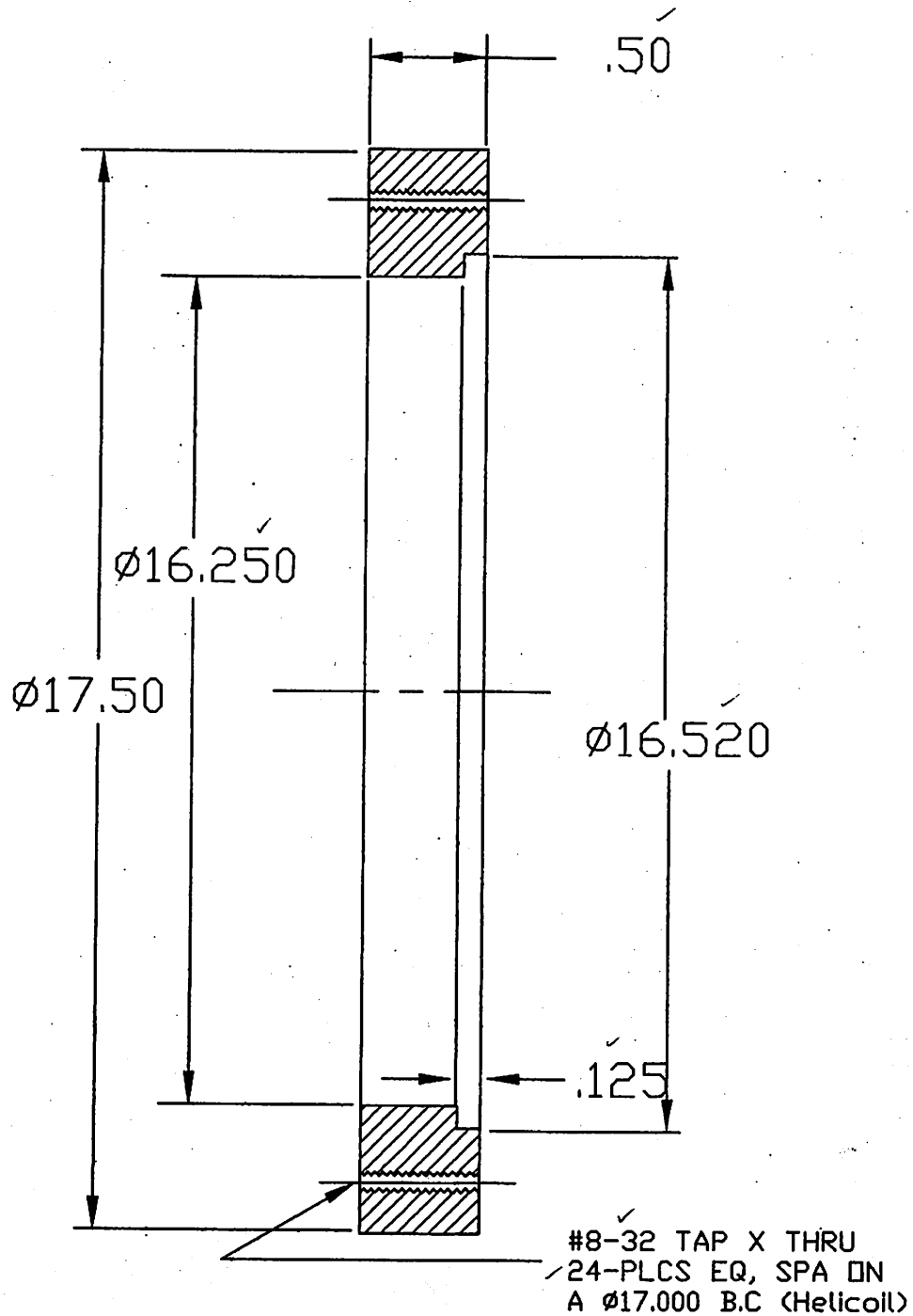
NOTE: EXACT HEAD HEIGHT MUST BE KNOWN BEFORE CUTTING OF CYLINDERS

ITEM	QTY.	A' DIA.	B' LGTH	C' THK	MATERIAL	CIRCUM.	SHEAR LGTH
✓ 16	1	16.50	14.25	.125	ALUMINUM	51.443	
✓ 17	1	19.00	15.625	.19	ALUMINUM	59.099	
✓ 18	1	8.00	12.500	.125	(AL-TUBE)		
✓ 19	1	16.00	12.375	.125	ALUMINUM	49.873	
✓ 20	1	16.870	14.000	.06	6-10 SHEET 1/6" ALUMINUM	52.825 *	
✓ 21	1	19.00	12.875	.19	ALUMINUM	59.099	

OUT 49.873
1/6" ALUMINUM

CYLINDER CHART





LOWER LN2 FLANGE

MATL : ALUMINUM
 QTY : 1 - EACH

DWG : 061501-25
061501-25



VACUUM COUPLING & PLUG - PRICES

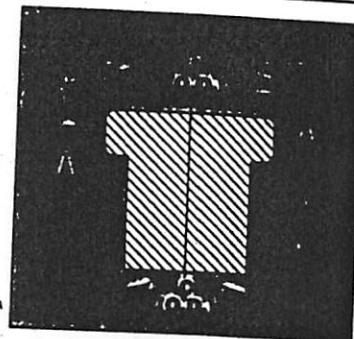
STAINLESS STEEL

COUPLINGS

NOTE: Prices are for Couplings with Buna "N" O-Rings - For Viton O-Rings, Add "V" Suffix after K or KM.
PRICING: Add \$1.00 06-100. Add \$2.00 112-200

PLUGS

PART NUMBER STYLE KM (THIN-WALL)	STYLE K (THICK-WALL)	UNIT PRICE	PART NUMBER	UNIT PRICE
S-06-KM	S-06-K		S-06-P	
S-12-KM	S-12-K	\$ 30.00	S-12-P	\$ 14.00
S-18-KM	S-18-K	\$ 30.00	S-18-P	\$ 14.00
S-25-KM	S-25-K	\$ 30.00	S-25-P	\$ 14.00
S-31-KM	S-31-K	\$ 30.00	S-31-P	\$ 14.00
S-38-KM	S-38-K	\$ 32.00	S-38-P	\$ 14.00
S-50-KM	S-50-K	\$ 32.00	S-50-P	\$ 14.00
S-62-KM	S-62-K	\$ 35.00	S-62-P	\$ 14.00
S-75-KM	S-75-K	\$ 38.00	S-75-P	\$ 17.00
S-87-KM	S-87-K	\$ 40.00	S-87-P	\$ 17.00
S-100-KM	S-100-K	\$ 45.00	S-100-P	\$ 17.00
S-112-KM	S-112-K	\$ 50.00	S-112-P	\$ 17.00
S-125-KM	S-125-K	\$ 65.00	S-125-P	\$ 24.00
S-138-KM	S-138-K	\$ 80.00	S-138-P	\$ 24.00
S-150-KM	S-150-K	\$ 105.00	S-150-P	\$ 24.00
S-162-KM	S-162-K	\$ 120.00	S-162-P	\$ 35.00
S-200-KM	S-200-K	\$ 130.00	S-200-P	\$ 35.00
		\$ 140.00		\$ 38.00



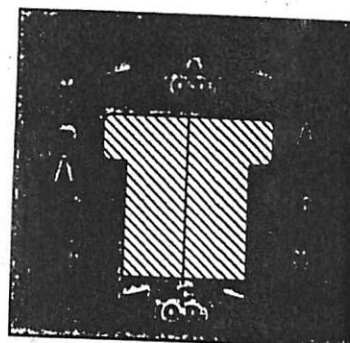
BRASS

COUPLINGS

NOTE: Prices are for Couplings with Buna "N" O-Rings - For Viton O-Rings, Add "V" Suffix after K or KM.
PRICING: Add \$1.00 06-100. Add \$2.00 112-200

PLUGS

PART NUMBER STYLE KM (THIN-WALL)	STYLE K (THICK-WALL)	UNIT PRICE	PART NUMBER	UNIT PRICE
B-06-KM	B-06-K	\$ 20.00	B-06-P	
B-12-KM	B-12-K	\$ 20.00	B-12-P	\$ 10.00
B-18-KM	B-18-K	\$ 20.00	B-18-P	\$ 10.00
B-25-KM	B-25-K	\$ 20.00	B-25-P	\$ 10.00
B-31-KM	B-31-K	\$ 20.00	B-31-P	\$ 10.00
B-38-KM	B-38-K	\$ 22.00	B-38-P	\$ 10.00
B-50-KM	B-50-K	\$ 22.00	B-50-P	\$ 10.00
B-62-KM	B-62-K	\$ 25.00	B-62-P	\$ 10.00
B-75-KM	B-75-K	\$ 28.00	B-75-P	\$ 13.00
B-87-KM	B-87-K	\$ 30.00	B-87-P	\$ 13.00
B-100-KM	B-100-K	\$ 35.00	B-100-P	\$ 13.00
B-112-KM	B-112-K	\$ 40.00	B-112-P	\$ 15.00
B-125-KM	B-125-K	\$ 43.00	B-125-P	\$ 20.00
B-138-KM	B-138-K	\$ 45.00	B-138-P	\$ 20.00
B-150-KM	B-150-K	\$ 55.00	B-150-P	\$ 20.00
B-162-KM	B-162-K	\$ 65.00	B-162-P	\$ 25.00
B-200-KM	B-200-K	\$ 80.00	B-200-P	\$ 25.00
		\$ 90.00		\$ 28.00



COMBINATION; BRASS NUT & COMPRESSION RING WITH STAINLESS SLEEVE

COUPLINGS

NOTE: Prices are for Couplings with Buna "N" O-Rings - For Viton O-Rings, Add "V" Suffix after K or KM.
PRICING: Add \$1.00 06-100. Add \$2.00 112-200

PLUG DIMENSIONAL DATA

PART NUMBER STYLE KM (THIN-WALL)	STYLE K (THICK-WALL)	UNIT PRICE	SIZE	A	B	C	D
SB-06-KM	SB-06-K		06	.375	.250	.0625	.750
SB-12-KM	SB-12-K	\$ 28.00	12	.375	.250	.1250	.750
SB-18-KM	SB-18-K	\$ 28.00	18	.375	.250	.1875	.750
SB-25-KM	SB-25-K	\$ 28.00	25	.500	.250	.2500	.750
SB-31-KM	SB-31-K	\$ 30.00	31	.625	.250	.3125	.750
SB-38-KM	SB-38-K	\$ 30.00	38	.625	.250	.3750	.750
SB-50-KM	SB-50-K	\$ 30.00	50	.750	.250	.5000	.750
SB-62-KM	SB-62-K	\$ 33.00	62	.875	.250	.6250	.750
SB-75-KM	SB-75-K	\$ 35.00	75	1.000	.250	.7500	.750
SB-87-KM	SB-87-K	\$ 40.00	87	1.125	.250	.8750	.750
SB-100-KM	SB-100-K	\$ 45.00	100	1.250	.250	1.0000	.750
SB-112-KM	SB-112-K	\$ 60.00	112	1.375	.250	1.1250	.750
SB-125-KM	SB-125-K	\$ 70.00	125	1.500	.250	1.2500	.750
SB-138-KM	SB-138-K	\$ 95.00	138	1.625	.250	1.3750	.750
SB-150-KM	SB-150-K	\$ 110.00	150	1.750	.250	1.5000	.750
SB-162-KM	SB-162-K	\$ 120.00	162	1.875	.250	1.6250	.750
SB-200-KM	SB-200-K	\$ 130.00	200	2.250	.250	2.0000	.750

A&N

#B-38-P, 1-Each/Order

AN Corporation
P.O. Box 878
Ingles, Florida 34449-9878
(352) 447-2411
FAX (352) 447-2222

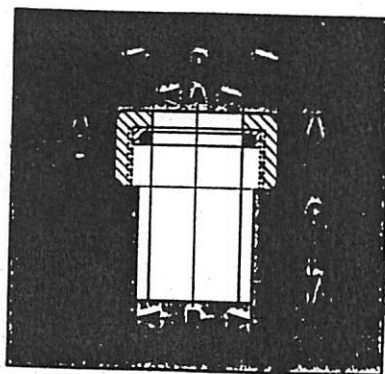


DWG: 061501-31

VACUUM COUPLING DIMENSIONS

BRASS, 304 STAINLESS, BRASS/STAINLESS VACUUM COUPLINGS

STYLE KM



MACHINE TO
1.00 LG.

#SB-38-KM

PART NUMBER	TUBE OD	A	B	C	D	E	O-RING PART NUMBER
06-KM	1/16	.072	3/8	15/16	1/2	5/8	2-003
12-KM	1/8	.136	3/8	15/16	1/2	5/8	2-006
18-KM	3/16	.199	3/8	15/16	5/8	5/8	2-008
25-KM	1/4	.265	3/8	15/16	5/8	5/8	2-010
31-KM	5/16	.328	1/2	15/16	7/8	5/8	2-011
38-KM	3/8	.390	1/2	15/16	7/8	5/8	2-012
50-KM	1/2	.515	5/8	15/16	7/8	5/8	2-014
62-KM	5/8	.640	3/4	1 1/2	13/16	3/4	2-114
75-KM	3/4	.765	7/8	1 5/8	13/8	3/4	2-116
87-KM	7/8	.890	1	1 5/8	13/8	3/4	2-118
100-KM	1	1.015	1 1/8	1 7/8	1 5/8	3/4	2-120
112-KM	1 1/8	1.140	1 1/4	1 7/8	1 7/8	3/4	2-216
125-KM	1 1/4	1.265	1 1/2	2	1 7/8	3/4	2-218
138-KM	1 3/8	1.390	1 5/8	2 1/8	2	7/8	2-220
150-KM	1 1/2	1.515	1 3/4	2 1/4	2 1/4	7/8	2-222
162-KM	1 5/8	1.640	1 7/8	2 1/4	2 3/8	7/8	2-223
200-KM	2	2.015	2 1/4	2 1/4	2 3/4	7/8	2-226

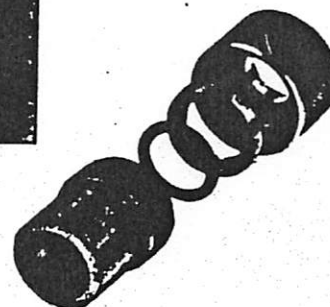
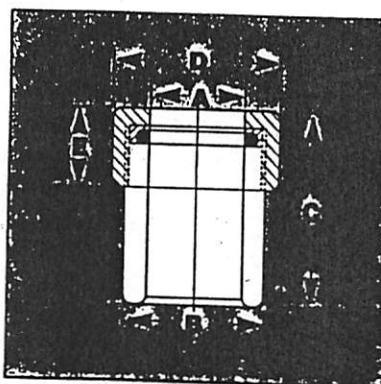
■ Sizes Nest to Next Size.

■ "O" Ring Groove Machined Into Retainer Ring.

* TO BE MACHINED TO 1.00 LG.

STYLE K

PART NUMBER	TUBE OD	A	B	C	D	E	O-RING PART NUMBER
06-K	1/16	.072	3/8	15/16	1/2	5/8	2-003
12-K	1/8	.136	3/8	15/16	1/2	5/8	2-006
18-K	3/16	.199	3/8	15/16	5/8	5/8	2-008
25-K	1/4	.265	1/2	15/16	5/8	5/8	2-010
31-K	5/16	.328	1/2	15/16	7/8	5/8	2-011
38-K	3/8	.390	5/8	15/16	7/8	5/8	2-012
50-K	1/2	.515	3/4	15/16	7/8	5/8	2-014
62-K	5/8	.640	7/8	1 1/2	13/16	3/4	2-114
75-K	3/4	.765	1 1/8	1 5/8	13/8	3/4	2-116
87-K	7/8	.890	1 1/4	1 5/8	13/8	3/4	2-118
100-K	1	1.015	1 3/8	1 7/8	1 5/8	3/4	2-120
112-K	1 1/8	1.140	1 1/2	1 7/8	1 7/8	3/4	2-216
125-K	1 1/4	1.265	1 11/16	2	1 7/8	3/4	2-218
138-K	1 3/8	1.390	1 13/16	2 1/8	2	7/8	2-220
150-K	1 1/2	1.515	2	2 1/4	2 1/4	7/8	2-222
162-K	1 5/8	1.640	2 1/8	2 1/4	2 3/8	7/8	2-223
200-K	2	2.015	2 1/2	2 1/4	2 3/4	7/8	2-226



■ "O" Ring Groove Machined Into Retainer Ring.
■ I.D. Dimension Allows for Tube Variations.



A&N Corporation
P.O. Box 878
Ingls, Florida 34449-9878
(352) 447-2411
FAX (352) 447-2322

#SB-38-KM

1-EACH/DEWAR

DWG: 061501-32

QF FLANGES

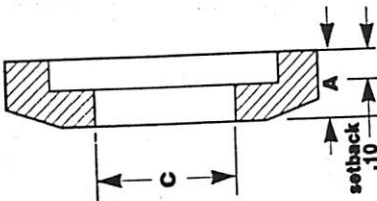
BORED WELD FLANGE 304 STAINLESS STEEL

PART NUMBER	BORE SIZE	A	B	C	UNIT PRICE
QF10-B25	1/4"	.20		.26	\$ 8.00
QF10-B38	3/8"	.20		.38	\$ 8.00
QF10-B50	1/2"	.20	.51	.45	\$ 8.00
QF16-B25	1/4"	.20		.26	\$ 8.00
QF16-B38	3/8"	.20		.38	\$ 8.00
QF16-B50	1/2"	.20	.51	.45	\$ 8.00
QF16-B75	3/4"	.20	.76	.68	\$ 8.00
QF25-B25	1/4"	.20		.26	\$ 9.00
QF25-B38	3/8"	.20		.38	\$ 9.00
QF25-B50	1/2"	.20	.51	.45	\$ 9.00
QF25-B75	3/4"	.20	.76	.71	\$ 9.00
QF25-B100	1"	.20	1.01	.94	\$ 9.00
QF40-B25	1/4"	.20		.26	\$ 12.50
QF40-B38	3/8"	.20		.38	\$ 12.50
QF40-B50	1/2"	.20	.51	.45	\$ 12.50
QF40-B75	3/4"	.20	.76	.71	\$ 12.50
QF40-B100	1"	.20	1.01	.94	\$ 12.50
QF40-B150	1 1/2"	.20	1.51	1.44	\$ 12.50
QF50-B25	1/4"	.20		.26	\$ 18.50
QF50-B38	3/8"	.20		.38	\$ 18.50
QF50-B50	1/2"	.20	.51	.45	\$ 18.50
QF50-B75	3/4"	.20	.76	.71	\$ 18.50
QF50-B100	1"	.20	1.01	.94	\$ 18.50
QF50-B150	1 1/2"	.20	1.51	1.44	\$ 18.50
QF50-B200	2"	.20	2.01	1.94	\$ 18.50

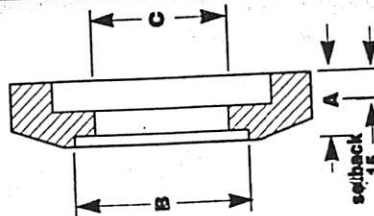
■ 304 Stainless steel

■ Standard inch tube O.D.'s

BORE SIZE:
1/4" & 3/8"



BORE SIZE:
1/2" THRU 2"



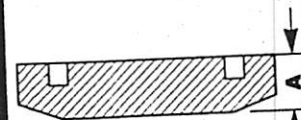
BLANK FLANGES 304 STAINLESS STEEL

PART NUMBER	A	UNIT PRICE
QF10-050-SB	.20	\$ 7.00
QF16-075-SB	.20	\$ 7.00
QF25-100-SB	.20	\$ 7.50
QF40-150-SB	.20	\$ 12.50
QF50-200-SB	.20	\$ 15.00

■ 304 Stainless steel

■ Not recommended for welding but may be modified (use unbored stub)

■ To close off unused ports



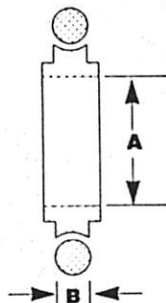
1-EACH

QF16-B50

A & N

DWG: 061501-33

QF CENTERING RINGS

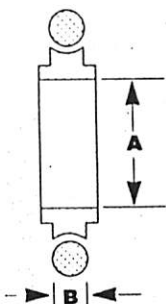


- 304 Stainless steel
- Replaceable "O" ring
- Buna-N - 100° C max.
- Viton - 200° C max.
- Silicone - 200° C max. chemically resistant

CENTERING RING ASSEMBLY 304 STAINLESS STEEL

PART NUMBER	BUNA N/ SILICONE/VITON	A	B	UNIT PRICE		
				BUNA N	SILICONE	VITON
QF10-050-SR-	B, S, or V	.39	.21	\$ 4.50	\$ 5.50	\$ 5.50
QF16-075-SR-	B, S, or V	.63	.21	\$ 4.50	\$ 5.50	\$ 5.50
QF25-100-SR-	B, S, or V	.98	.21	\$ 5.75	\$ 6.50	\$ 7.00
QF40-150-SR-	B, S, or V	1.53	.21	\$ 8.50	\$ 9.75	\$ 9.75
QF50-200-SR-	B, S, or V	1.97	.21	\$ 10.00	\$ 12.00	\$ 12.50

* Be sure to add B, S or V to part number

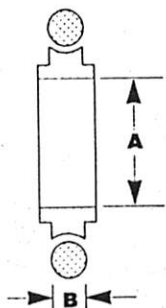


- Brass
- Replaceable "O" ring
- Buna-N - 100° C max.
- Viton - 200° C max.
- Silicone - 200° C max. chemically resistant

CENTERING RING ASSEMBLY BRASS

PART NUMBER	BUNA N/ SILICONE/VITON	A	B	UNIT PRICE		
				BUNA N	SILICONE	VITON
QF10-050-BR-	B, S, or V	.39	.21	\$ 2.50	\$ 4.85	\$ 5.00
QF16-075-BR-B	B, S, or V	.63	.21	\$ 2.50	\$ 4.85	\$ 5.00
QF25-100-BR-B	B, S, or V	.98	.21	\$ 3.50	\$ 5.50	\$ 5.50
QF40-150-BR-	B, S, or V	1.53	.21	\$ 4.50	\$ 7.50	\$ 7.50
QF50-200-BR-	B, S, or V	1.97	.21	\$ 5.50	\$ 9.50	\$ 9.50

* Be sure to add B, S or V to part number



- Aluminum
- Replaceable "O" ring
- Buna-N - 100° C max.
- Viton - 200° C max.
- Silicone - 200° C max. chemically resistant

CENTERING RING ASSEMBLY ALUMINUM

PART NUMBER	BUNA N/ SILICONE/VITON	A	B	UNIT PRICE		
				BUNA N	SILICONE	VITON
QF10-050-AR-	B, S, or V	.39	.21	\$ 2.50	\$ 4.85	\$ 5.00
QF16-075-AR-	B, S, or V	.63	.21	\$ 2.50	\$ 4.85	\$ 5.00
QF25-100-AR-	B, S, or V	.98	.21	\$ 3.50	\$ 5.50	\$ 5.50
QF40-150-AR-	B, S, or V	1.53	.21	\$ 4.50	\$ 7.50	\$ 7.50
QF50-200-AR-	B, S, or V	1.97	.21	\$ 5.50	\$ 9.50	\$ 9.50

* Be sure to add B, S or V to part number



- 304 Stainless steel

CENTERING RING ASSEMBLY 304 STAINLESS STEEL WITH SCREEN

from: A & N

(63)

QF-25-100-BR-B (2-EACH)

(34)

QF-16-075-BR-B (2-EACH)

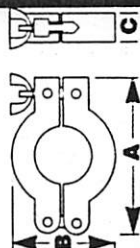
DWG: 061501-#63
DWG: 061501-34

This clamp is also available in an all stainless steel version.

WING-NUT ALUMINUM CLAMP

PART NUMBER	TUBE SIZE	A	B	C	UNIT PRICE
QF16-075-CW	1/2" & 3/4"	2.45	1.67	.65	\$ 5.25
QF25-100-CW	1"	2.86	2.16	.65	\$ 7.00
QF40-150-CW	1 1/2"	3.53	2.73	.65	\$ 8.25
QF50-200-CW	2"	4.80	3.70	.90	\$ 13.75

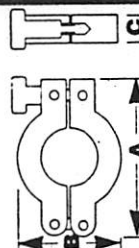
- Industry standard die-cast aluminum clamp



"T" KNOB ALUMINUM CLAMP

PART NUMBER	TUBE SIZE	A	B	C	UNIT PRICE
QF16-075-CT	1/2" & 3/4"	2.45	1.67	.65	\$ 7.25
QF25-100-CT	1"	2.86	2.16	.65	\$ 9.00
QF40-150-CT	1 1/2"	3.53	2.73	.65	\$ 10.50
QF50-200-CT	2"	4.80	3.70	.90	\$ 16.00

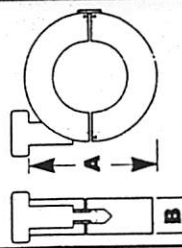
- Industry standard die-cast aluminum clamp
- "T" knob for easier closure



A&N CNC ALUMINUM CLAMP

PART NUMBER	TUBE SIZE	A	B	MAX PSI	UNIT PRICE
QF16-075-C	1/2" & 3/4"	1.94	.63	300	\$9.50
QF25-100-C	1"	2.45	.63	250	\$11.00
QF40-150-C	1 1/2"	2.94	.63	220	\$12.50
QF50-200-C	2"	3.94	.63		\$18.50

- CNC machined from aluminum bar for extra strength and durability
- Stainless steel pins & stud
- Integral handle lock to prevent accidental opening



ELIMINATES THE NEED FOR OVER PRESSURE RINGS FOR SIZES QF16, QF25, AND QF40.

A&N Corporation
P.O. Box 878
Ingles, Florida 34449-0878
(352) 447-2411
FAX (352) 447-2322



Sales Department 1-800-352-6431
1-800-FLANGE1

(35)

QF16-075-CT

(60)

QF25-100-CT

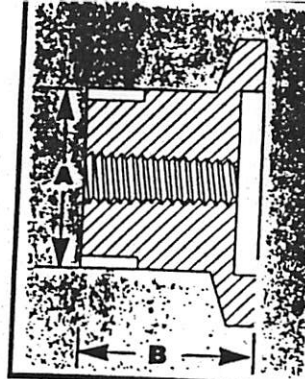
2-EACH

DWG: 061501-35, 60

UNIT PRICE
12.00
12.00
13.50
16.00
23.00

UNIT PRICE
1.75
1.75
3.80
5.50
1.25

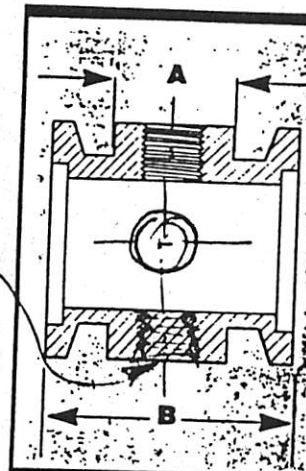
11/16: 061501 - 36



- 6061 T6 Aluminum
- 1/4" NPT female thread
- Use with teflon tape

FLANGE ADAPTOR TO 1/4" NPT ALUMINUM

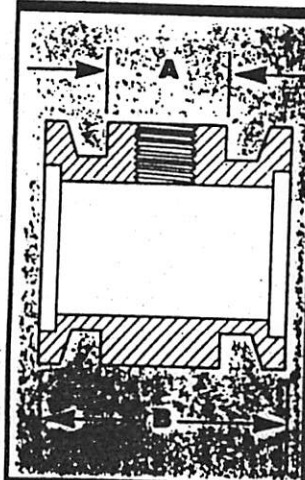
PART NUMBER	A	B	UNIT PRICE
QF10-050-AP25	.62	.75	\$ 11.75
QF16-075-AP25	.62	.75	\$ 11.75
QF25-100-AP25	.88	.75	\$ 13.00
QF40-150-AP25	1.25	1.00	\$ 15.50
QF50-200-AP25	1.75	1.00	\$ 21.25



- Aluminum
- Tapped to female NPT
- Special tapped hole on request
- Use with teflon tape

ADAPTIVE TEE TO FEMALE NPT ALUMINUM

PART NUMBER	A	B	UNIT PRICE
QF16x1/8NPT-AT	.76	1.57	\$ 26.25
QF16x1/4NPT-AT	.76	1.57	\$ 27.25
QF25x1/8NPT-AT	.76	1.57	\$ 28.25
QF25x1/4NPT-AT	.76	1.57	\$ 29.25
QF40x1/8NPT-AT	.76	1.57	\$ 33.50
QF40x1/4NPT-AT	.76	1.57	\$ 34.50
QF50x1/8NPT-AT	.76	1.57	\$ 45.00
QF50x1/4NPT-AT	.76	1.57	\$ 46.00



- 304 Stainless steel
- Tapped to female NPT
- Special tapped hole on request
- Use with teflon tape

ADAPTIVE TEE TO FEMALE NPT 304 STAINLESS STEEL

PART NUMBER	A	B	UNIT PRICE
QF16x1/8NPT-ST	.76	1.57	\$ 37.75
QF16x1/4NPT-ST	.76	1.57	\$ 38.75
QF25x1/8NPT-ST	.76	1.57	\$ 43.00
QF25x1/4NPT-ST	.76	1.57	\$ 44.00
QF40x1/8NPT-ST	.76	1.57	\$ 59.00
QF40x1/4NPT-ST	.76	1.57	\$ 60.00
QF50x1/8NPT-ST	.76	1.57	\$ 77.00
QF50x1/4NPT-ST	.76	1.57	\$ 78.00

QF16x1/4NPT-AT

ATN

1- EACH

1/4" NPT 3-pieces @ 90° NPT

061501-36

WELD RING FLANGE 304 STAINLESS STEEL

PART NUMBER	TUBE SIZE	A	B	SET BACK C	UNIT PRICE
QF16-075-RF	3/4"	.76	.25	.17	\$ 9.00
QF25-100-RF	1"	1.01	.25	.17	\$ 9.00
QF40-150-RF	1 1/2"	1.51	.25	.17	\$ 12.50
QF50-200-RF	2"	2.01	.25	.17	\$ 18.50

- 304 Stainless
- Internal weld
- Self aligning
- Accepts standard tubing
- Thin design

SHORT WELD STUB FLANGE 304 STAINLESS STEEL

PART NUMBER	TUBE SIZE	A	B	C	UNIT PRICE
QF10-050-SS	1/2"	.50	.07	.50	\$ 8.50
QF16-050-SS	1/2"	.50	.07	.50	\$ 8.50
QF16-075-SS	3/4"	.75	.07	.50	\$ 8.50
QF25-100-SS	1"	1.00	.07	.50	\$ 9.50
QF40-150-SS	1 1/2"	1.50	.07	.75	\$ 13.00
QF50-200-SS	2"	2.00	.07	.75	\$ 19.00

- 304 Stainless steel
- Butt weld
- Standard inch tube diameters

SHORT WELD STUB FLANGE 6061-T6 ALUMINUM

PART NUMBER	TUBE SIZE	A	B	C	UNIT PRICE
QF10-050-AS	1/2"	.50	.07	.50	\$ 7.00
QF16-050-AS	1/2"	.50	.07	.50	\$ 7.00
QF16-075-AS	3/4"	.75	.07	.50	\$ 7.00
QF25-100-AS	1"	1.00	.07	.50	\$ 7.50
QF40-150-AS	1 1/2"	1.50	.07	.75	\$ 9.75
QF50-200-AS	2"	2.00	.07	.75	\$ 14.00

- 6061-T6 Aluminum
- Butt weld
- Standard inch tube diameters

QF16-075-SS

A & N corp

1-EACH DENOTA

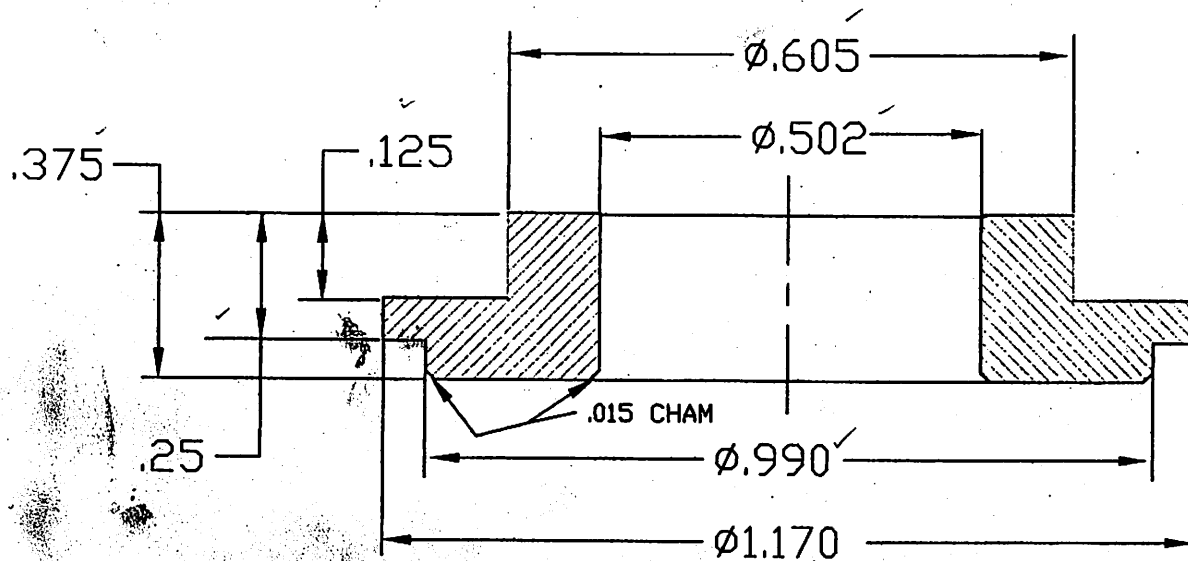
1-TOTAL

061501-37

DWG: 061501-37

UNIT PRICE
2.50
2.50
3.00
3.50
4.50

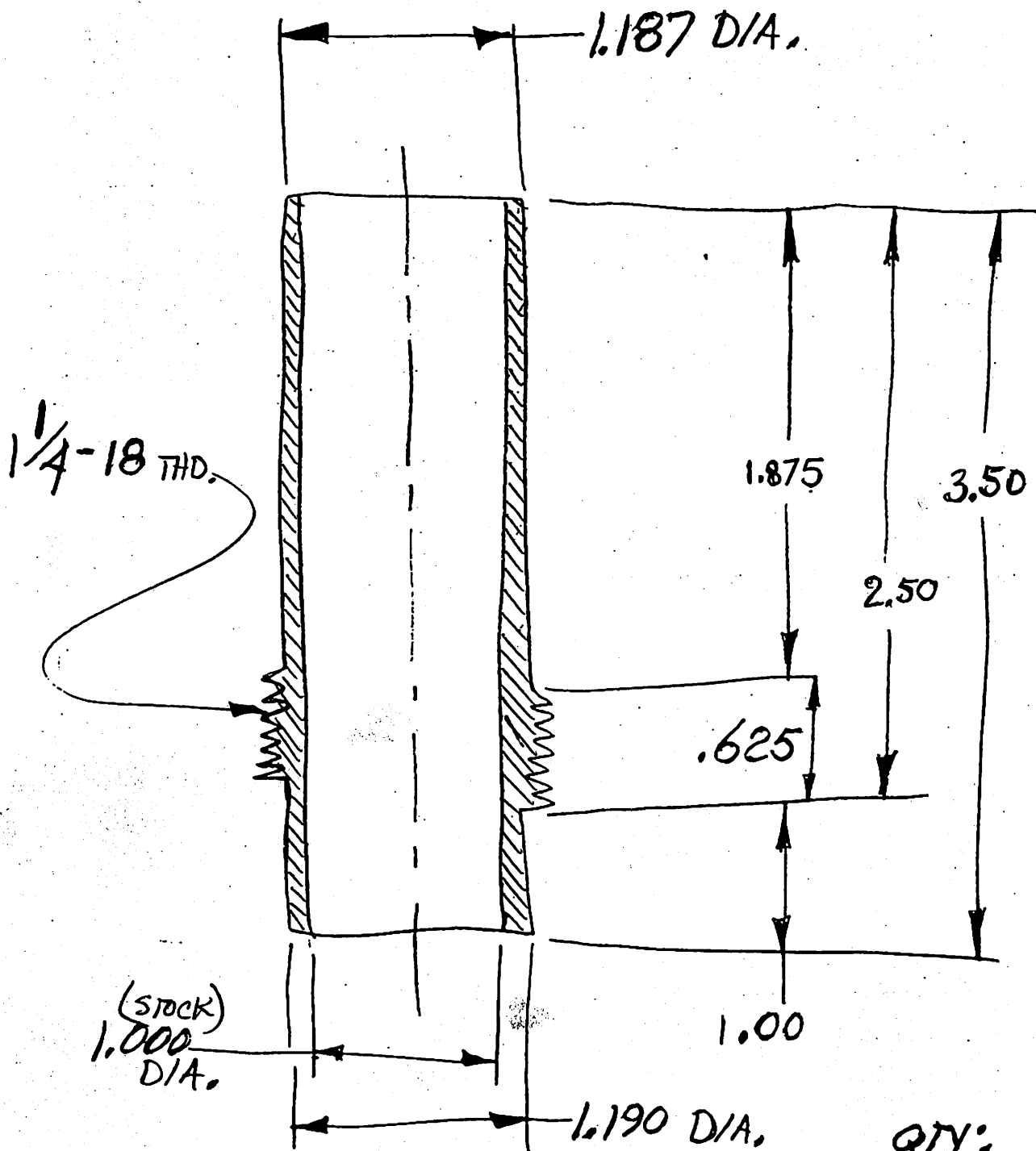
UNIT PRICE
.70
.70
1.30
1.70
1.90



WASHER

MATL : S/S
QTY : 1 -EACH

DWG : 061501-38



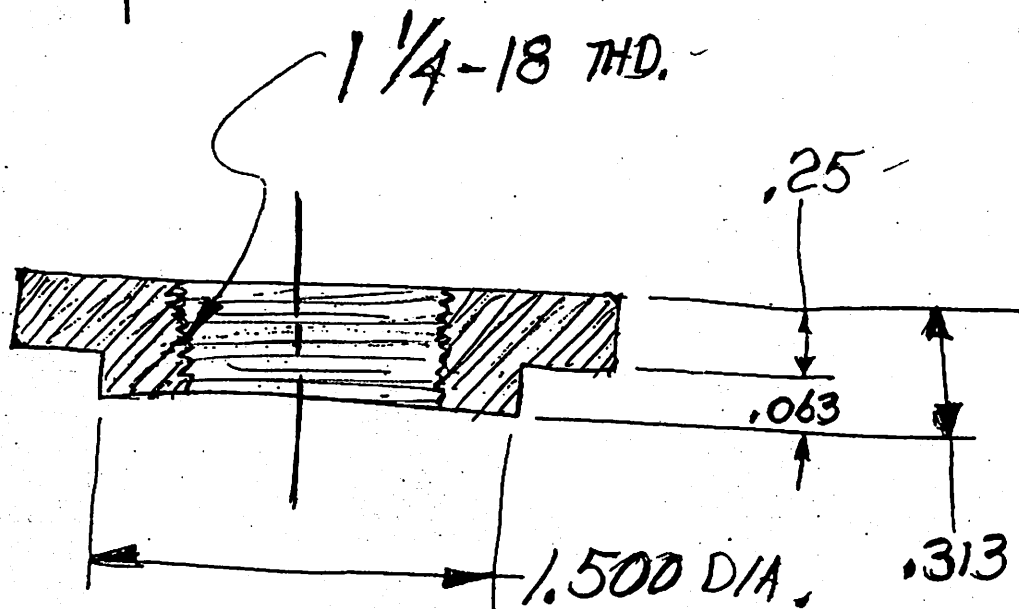
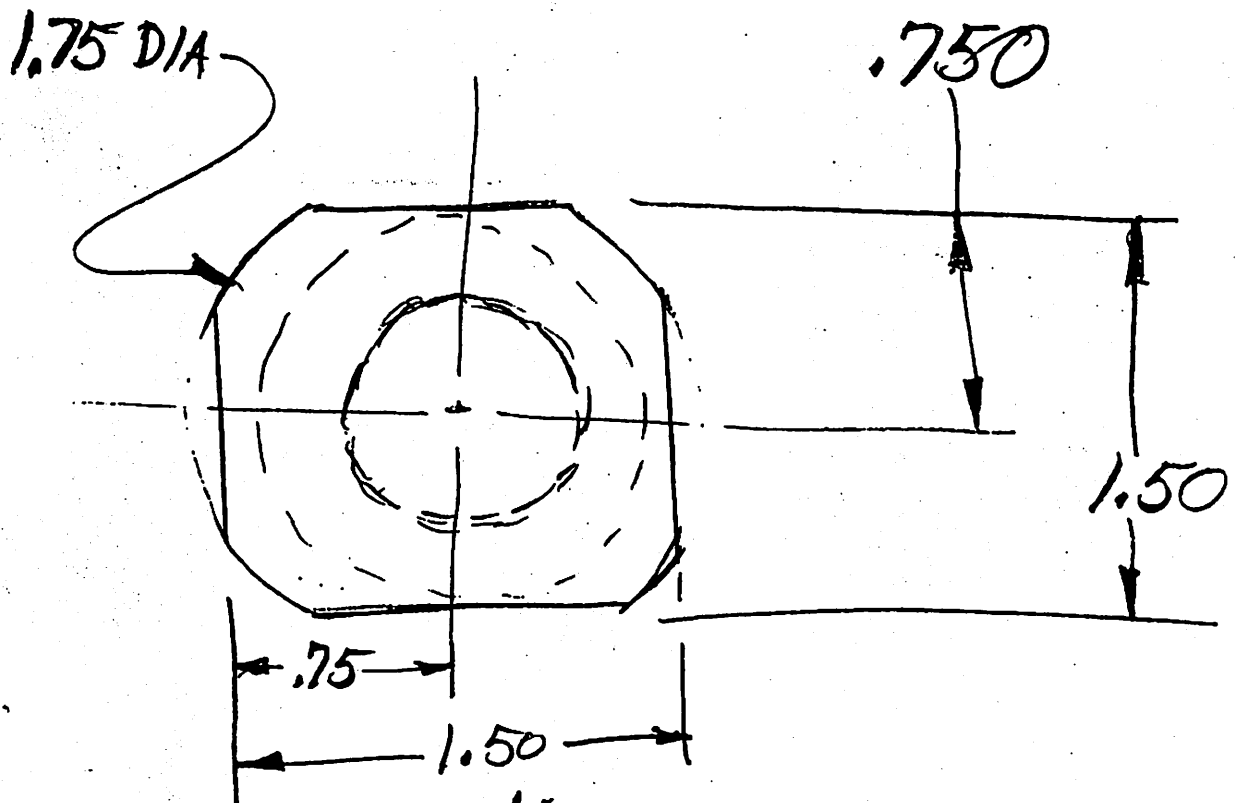
FILL PORT TUBE

QTY:
1 - EACH/PC
 1 - TOTAL

MAT'L: SIN. STL, 1 1/4" ϕ X 1/8" WALL.
TUBE

061501-39

061501-39



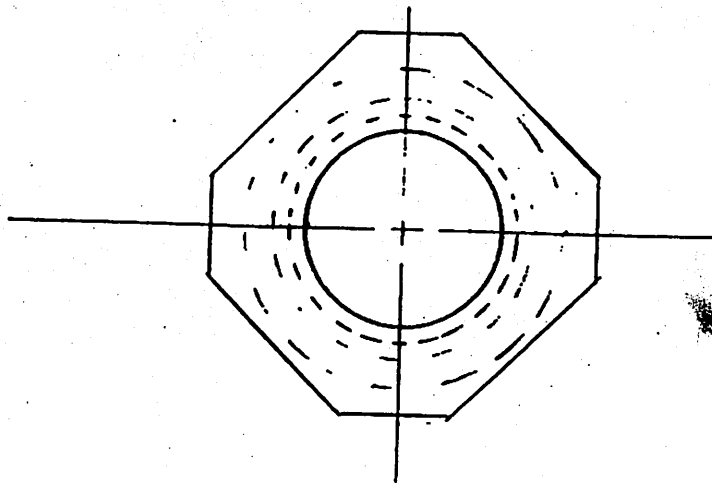
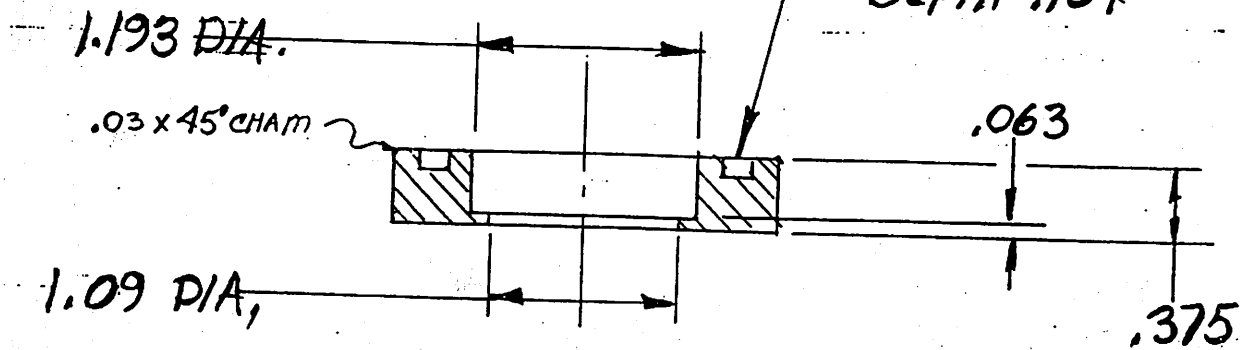
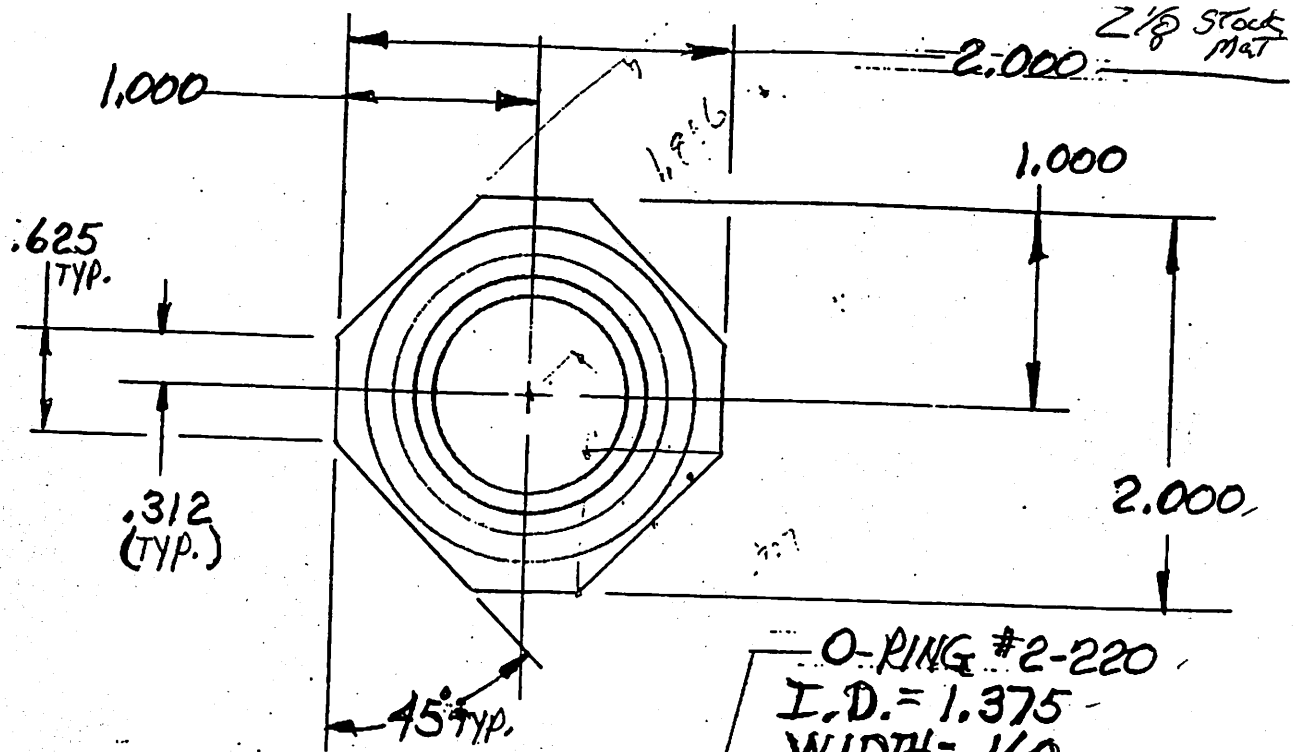
FILL-PORT NUT

MAT'L: BRASS

1 EACH/DEWAR

061501-40

DETAIL: 061501 - 10



QTY:
1-EACH/DEMT
TOTAL

MAT'L: STN. SZ.

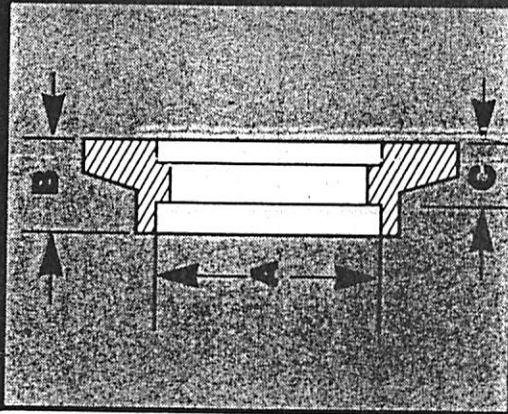
FILL-PORT FLANGE

DTAK: 061501 - 41



QF FLANGES

- 304 Stainless
- Internal weld
- Self aligning
- Accepts standard tubing
- Thin design

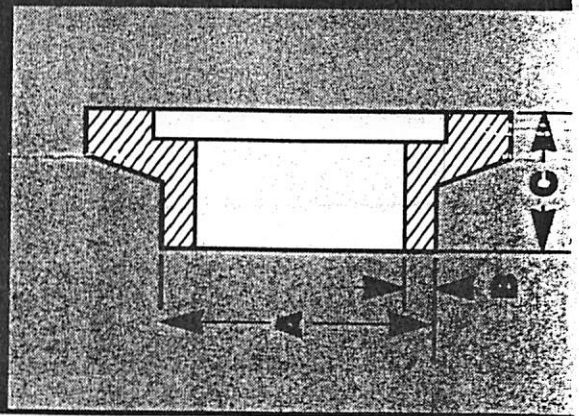


WELD RING FLANGE 304 STAINLESS STEEL

PART NUMBER	TUBE SIZE	A	B	SE
QF16-075-RF	3/4"	.76	.25	
QF25-100-RF	1"	1.01	.25	
QF40-150-RF	1 1/2"	1.51	.25	
QF50-200-RF	2"	2.01	.25	

SHORT WELD STUB FLANGE 304 STAINLESS STEEL

- 304 Stainless steel
- Butt weld
- Standard inch tube diameters



PART NUMBER	TUBE SIZE	A	B
QF10-050-SS	1/2"	.50	.07
QF16-050-SS	1/2"	.50	.07
QF16-075-SS	3/4"	.75	.07
QF25-100-SS	1"	1.00	.07
QF40-150-SS	1 1/2"	1.50	.07

QF25-100-RF

A4N

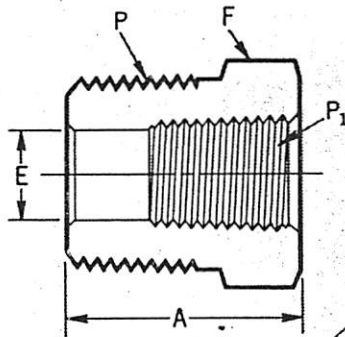
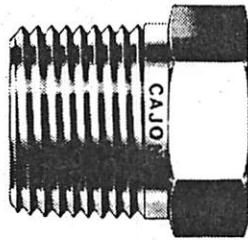
DWG: 06/501-54

.28	9/16
.38	11/16
.47	7/8
.62	1 1/16
.88	1 3/8

E Min. Opening	F Hex Flat
.19	9/16
.28	3/4
.38	7/8
.47	1 1/16
.62	1 5/16
.88	1 5/8

A	F Hex Flat
.75	9/16
.91	3/4
1.03	7/8
1.34	1 1/16
1.44	1 5/16
1.62	1 5/8

Reducing Bushing (RB) ■

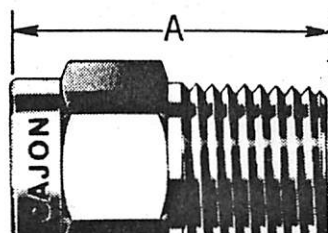


1-EACH

3/4	1/2	-12-RA-8	2.02	.47	1 5/8
1	1/4	-16-RA-4	1.96	.28	1 5/8
1	1/2	-16-RA-8	2.16	.47	1 5/8
1	3/4	-16-RA-12	2.17	.62	1 5/8

P Male NPT Size	P1 Female NPT Size	Basic Ordering Number	A	E Min. Opening	F Hex Flat
1/8	1/16	-2-RB-1	1.03	.19	
1/4	1/8	-4-RB-2	1.06	.28	
3/8	1/8	-6-RB-2	.86	.34	
3/8	1/4	-6-RB-4	1.19	.38	
1/2	1/8	-8-RB-2	1.08	.34	
1/2	1/4	-8-RB-4	1.08	.45	
1/2	3/8	-8-RB-6	1.41	.47	
3/4	1/4	-12-RB-4	1.08	.45	1 1/8
3/4	3/8	-12-RB-6	1.08	.59	1 1/8
3/4	1/2	-12-RB-8	1.63	.62	1 1/8
1	1/4	-16-RB-4	1.37	.45	1 3/8
1	3/8	-16-RB-6	1.37	.59	1 3/8
1	1/2	-16-RB-8	1.37	.73	1 3/8
1	3/4	-16-RB-12	1.85	.88	1 3/8

Pipe Plug (P) ■

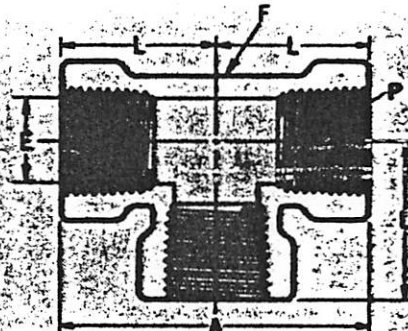
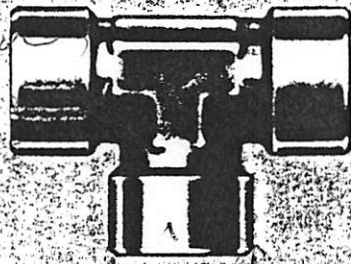


P Male NPT Size	Basic Ordering Number	A	F Hex Flat
1/16	-1-P	.75	
1/8	-2-P		
1/4	-4-P		

DWG : 061501-55

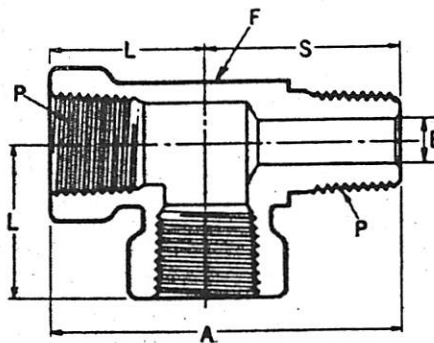
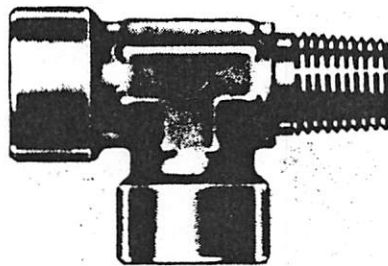
061501-55
Q6

Tee (T)



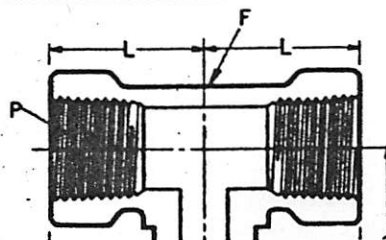
P Female NPT Size	Basic Ordering Number	A	E Min. Opening	F Wrench Flat	L
1/8	-2-T	2.08	.34	1/2	1.04
1/4	-4-T	2.34	.45	11/16	1.17
3/8	-6-T	2.84	.59	13/16	1.42
1/2	<u>85-8-T</u>	3.12	.73	1	1.56
3/4	-12-T	3.84	.94	1 1/4	1.92
1	-16-T	3.82	1.17	1 11/16	1.91

Street Tee (ST)



P Male & Female NPT Size	Basic Ordering Number	A	E Min. Opening	F Wrench Flat	L	S
1/8	-2-ST	1.91	.19	1/2	1.04	.87
1/4	-4-ST	2.34	.28	11/16	1.17	1.17
3/8	-6-ST	2.68	.38	13/16	1.42	1.26
1/2	-8-ST	3.12	.47	1	1.56	1.56

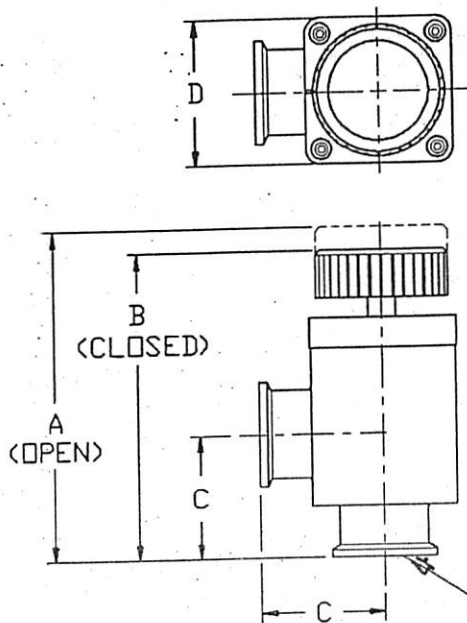
Branch Tee (BT)



IVF

DWG: 061501-56

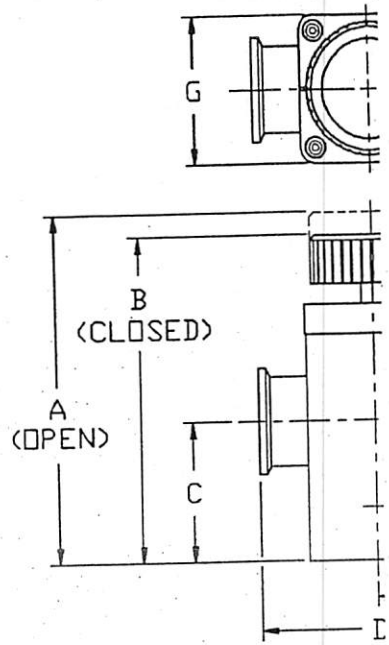
Right-Angle H/O Block Valve inches (mm)



MODELS	A	B	C	D
NW16	4.45 (113)	4.09 (104)	1.58 (40)	2.05 (52)
NW25	4.85 (123)	4.49 (114)	1.98 (50)	2.05 (52)
NW40	6.45 (164)	6.00 (152)	2.57 (65)	3.05 (77)

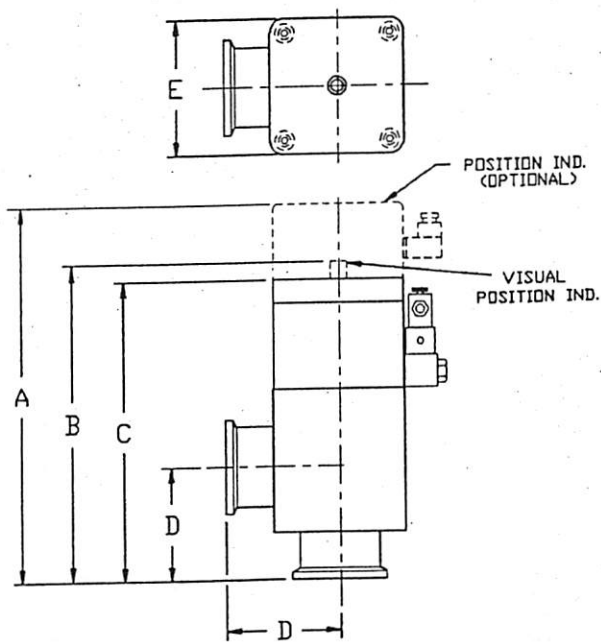
#1242-L6280-302
VARIAN
NW25

In-Line H/O Block Valve inches (mm)

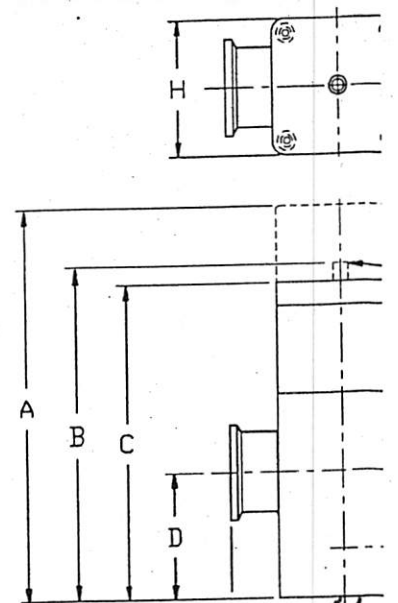


MODELS	A	B	C	D
NW16	4.71 (120)	4.35 (111)	1.47 (37)	3.16 (80)
NW25	5.11 (130)	4.75 (121)	2.04 (52)	3.96 (100)
NW40	7.06 (179)	6.61 (168)	2.85 (72)	5.14 (130)

Right-Angle A/O Block Valve inches (mm)

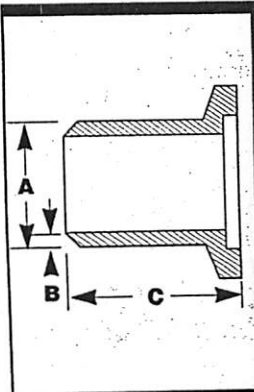


In-Line A/O Block Valve inches (mm)



061501-61
DWG: 061501-61

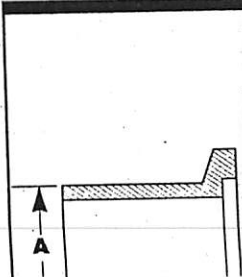
QF FLANGES



- 6061-T6 Aluminum
- Butt weld
- Standard inch tube diameters

LONG BUTT FLANGE ALUMINUM

PART NUMBER	TUBE SIZE	A	B	C	UNIT PRICE
QF10-050-ALF	1/2"	.50	.07	1.58	\$ 8.00
QF16-050-ALF	1/2"	.50	.07	1.58	\$ 8.00
QF16-075-ALF	3/4"	.75	.07	1.58	\$ 8.00
QF25-100-ALF	1"	1.00	.07	1.58	\$ 9.00
QF40-150-ALF	1 1/2"	1.50	.07	1.58	\$ 12.00
QF50-200-ALF	2"	2.00	.07	1.58	\$ 13.00



- Brass
- Braze weld
- Standard size tube O.D.

LONG BRAZE WELD FLANGE BRASS

PART NUMBER	TUBE SIZE	A	B	UNIT PRICE
QF16-050-LB	1/2"	.50	1.00	\$ 9.00
QF16-062-LB	5/8"	.62	1.00	\$ 9.00
QF16-075-LB	3/4"	.75	1.00	\$ 9.50

2-FA04

AGN

QF25-100-ALF

061501-62

DWG: 061501-

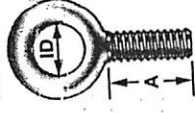
62

Main Pattern Eyebolts—For vertical and angled lifting applications up to a maximum of 45°. Eyebolt shoulder must be installed flush with the mounting surface. Work load limits are based on a straight vertical lift. Lifting at an angle significantly reduces the work load limit. Lifting at 45° reduces the work load limit by 75%.

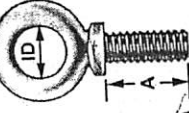
Zinc-Plated Steel—Good rust and corrosion resistance in most environments.
Galvanized Steel—Better corrosion and rust resistance than zinc-plated steel.
Type 304 Stainless Steel—Excellent corrosion resistance.
Type 316 Stainless Steel—Nonmagnetic. Better corrosion resistance than Type 304 stainless steel.

Forged Steel Eyebolts

For vertical and angled lifting applications up to a maximum of 45°. Eyebolt shoulder must be installed flush with the mounting surface. Work load limits are based on a straight vertical lift. Lifting at an angle significantly reduces the work load limit. Lifting at 45° reduces the work load limit by 75%.



Dimensions ID	Thread Size	Work Load Limit, lbs.	Dimensions A	ID	Each
Plain Steel—Cont.					
2"-4 1/2"	2 1/2"-4"	38,000	4"	3.25"	3013T61 ... \$97.20
2 1/2"-4"	2 1/2"-4"	56,000	5"	4"	3013T88 ... 218.75
Type 304 Stainless Steel					
1/4"-20"	1/4"-20"	460	1"	0.75"	33045T71 6.31
5/16"-18"	5/16"-18"	780	1 1/8"	0.88"	33045T72 11.06
3/8"-16"	3/8"-16"	1,000	1 1/4"	1"	33045T79 11.06
1/2"-13"	1/2"-13"	2,150	1 1/2"	1.18"	33045T73 16.43
5/8"-11"	5/8"-11"	3,440	1 3/4"	1.37"	33045T74 28.03
1"-8"	1"-8"	5,140	2"	1.5"	33045T75 30.70
1 1/4"-7"	1 1/4"-7"	9,370	2 1/2"	1.81"	33045T76 53.63
Type 316 Stainless Steel					
1/4"-20"	1/4"-20"	500	0.75"	0.75"	8891T32 10.05
5/16"-18"	5/16"-18"	800	0.75"	0.63"	8891T35 12.33
3/8"-16"	3/8"-16"	2,600	0.75"	1.19"	8891T38 17.22
1/2"-13"	1/2"-13"	2,150	1.38"	1"	8891T39 19.97
5/8"-11"	5/8"-11"	3,440	1"	1.25"	8891T41 38.12
1"-8"	1"-8"	5,140	2"	1.25"	8891T42 42.48
1 1/4"-7"	1 1/4"-7"	9,370	2 1/2"	1.5"	8891T43 41.27
1 1/2"-6"	1 1/2"-6"	5,140	2"	1.5"	8891T44 45.31
1 3/4"-5"	1 3/4"-5"	5,140	1 1/2"	1.44"	8891T45 57.98
1 5/8"-4"	1 5/8"-4"	9,370	2 1/2"	2"	8891T46 87.35



Plain Steel—Cont.					
2"-4 1/2"	2 1/2"-4"	38,000	4"	3.25"	3014T61 ... 97.20
Type 304 Stainless Steel					
1/4"-20"	1/4"-20"	460	1"	0.75"	33045T77 6.31
5/16"-18"	5/16"-18"	780	1 1/8"	0.88"	33045T78 11.06
3/8"-16"	3/8"-16"	1,000	1 1/4"	1"	33045T81 11.06
1/2"-13"	1/2"-13"	2,150	1 1/2"	1.18"	33045T82 16.43
5/8"-11"	5/8"-11"	3,440	1 3/4"	1.37"	33045T83 28.03
1"-8"	1"-8"	5,140	2"	1.5"	33045T84 30.70
1 1/4"-7"	1 1/4"-7"	9,370	2 1/2"	1.81"	33045T85 53.63
1 1/2"-6"	1 1/2"-6"	5,140	2"	1.5"	33045T86 94.15
Type 316 Stainless Steel					
1/4"-20"	1/4"-20"	500	0.75"	0.75"	8891T72 10.58
5/16"-18"	5/16"-18"	800	0.75"	0.63"	8891T75 15.41
3/8"-16"	3/8"-16"	2,600	0.75"	1.19"	8891T78 24.60
1/2"-13"	1/2"-13"	2,150	1.38"	1"	8891T79 19.97
5/8"-11"	5/8"-11"	3,440	1"	1.25"	8891T81 38.12
1"-8"	1"-8"	5,140	2"	1.25"	8891T82 42.48
1 1/4"-7"	1 1/4"-7"	9,370	2 1/2"	1.5"	8891T83 41.27
1 1/2"-6"	1 1/2"-6"	5,140	2"	1.5"	8891T84 45.31
1 3/4"-5"	1 3/4"-5"	5,140	1 1/2"	1.44"	8891T85 57.98
1 5/8"-4"	1 5/8"-4"	9,370	2 1/2"	2"	8891T86 87.35

National Fine Thread—For plain pattern, please ask for 3013T333 and specify thread size and length. For shoulder pattern, please ask for 3014T333 and specify thread size and length.
Shank Lengths—Self-colored steel eyebolts are available with longer shank lengths. For plain pattern, please ask for 3013T222 and specify thread size and length. For shoulder pattern, please ask for 3014T444 and specify thread size and length.

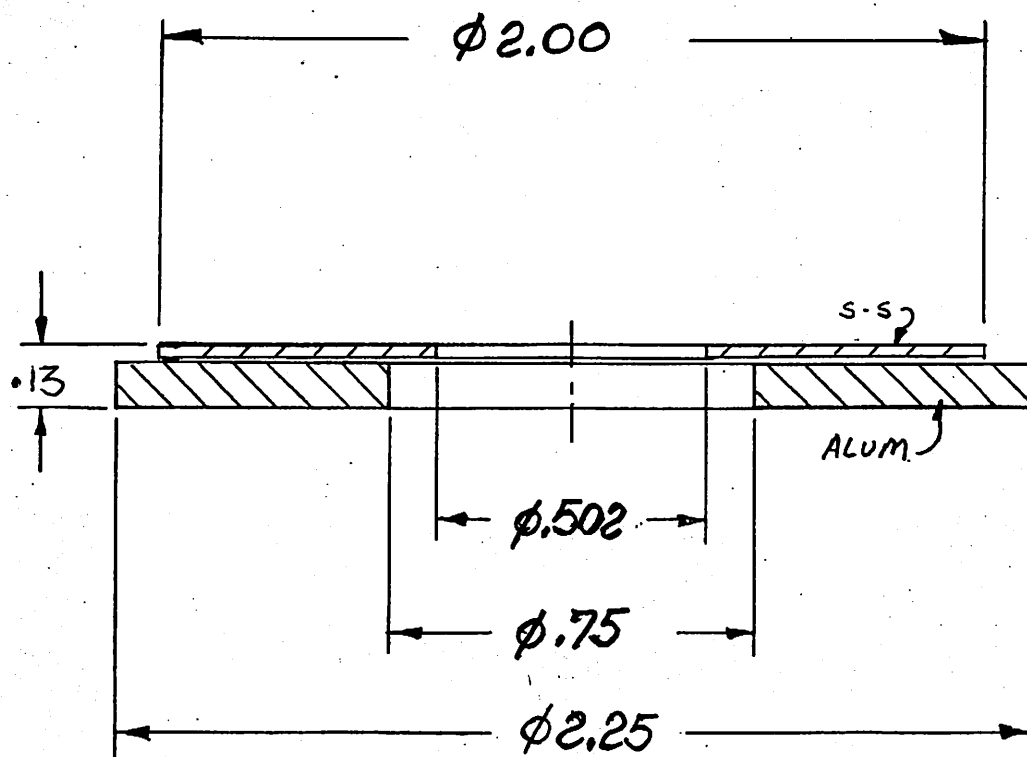
33045T81 — 3-BAK
 Plain Shoulder Each

Plain Steel		
16-Piece	29845T14	29845T17 ... \$66.16
20-Piece	29845T22	29845T25 ... 90.23
Type 316 Stainless Steel		
16-Piece		29845T31 ... 254.68
20-Piece		29845T32 ... 380.08

WILSON-CARR

Warning! Never exceed work load limits of items on t.

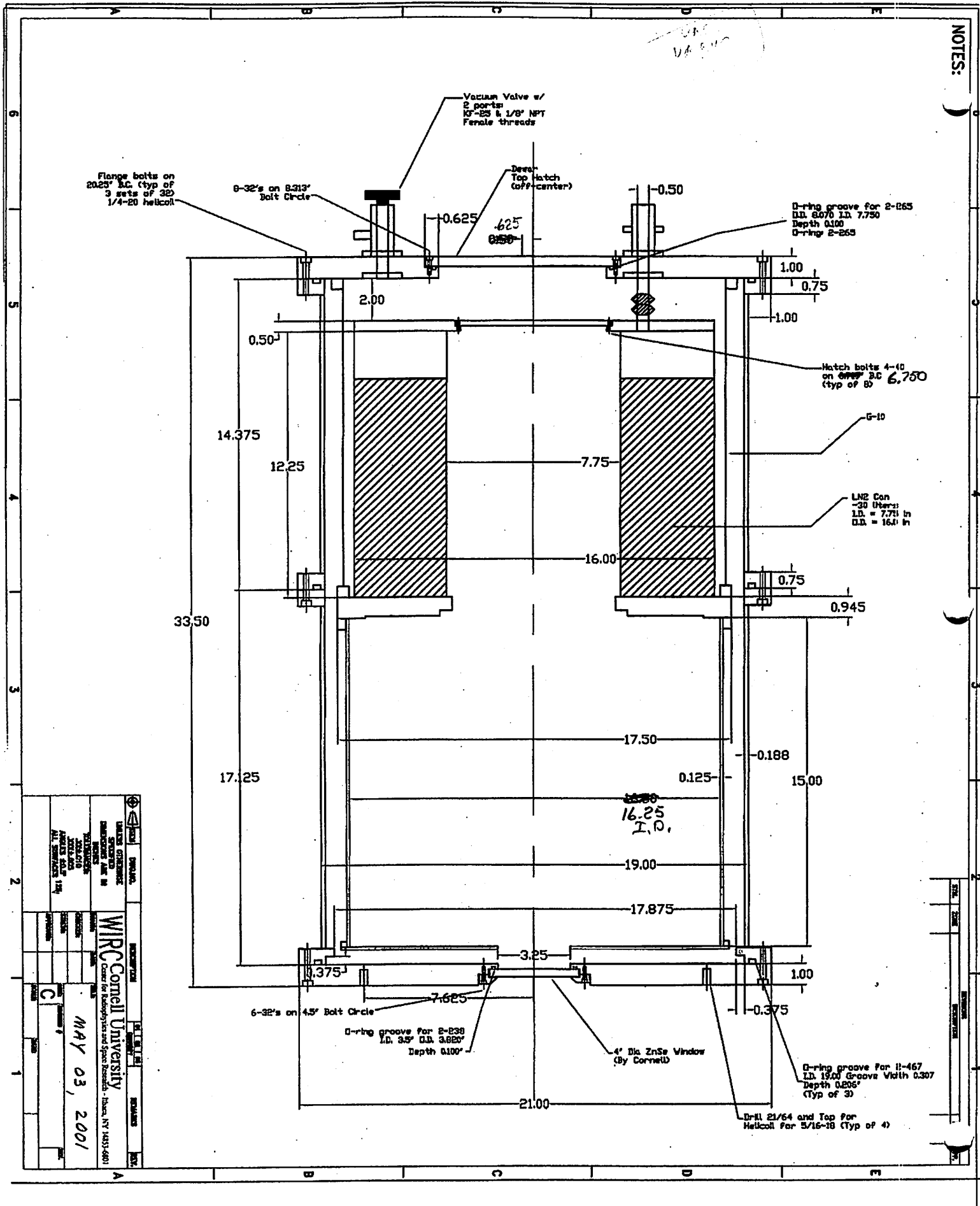
DWG: 061501-64
 1011



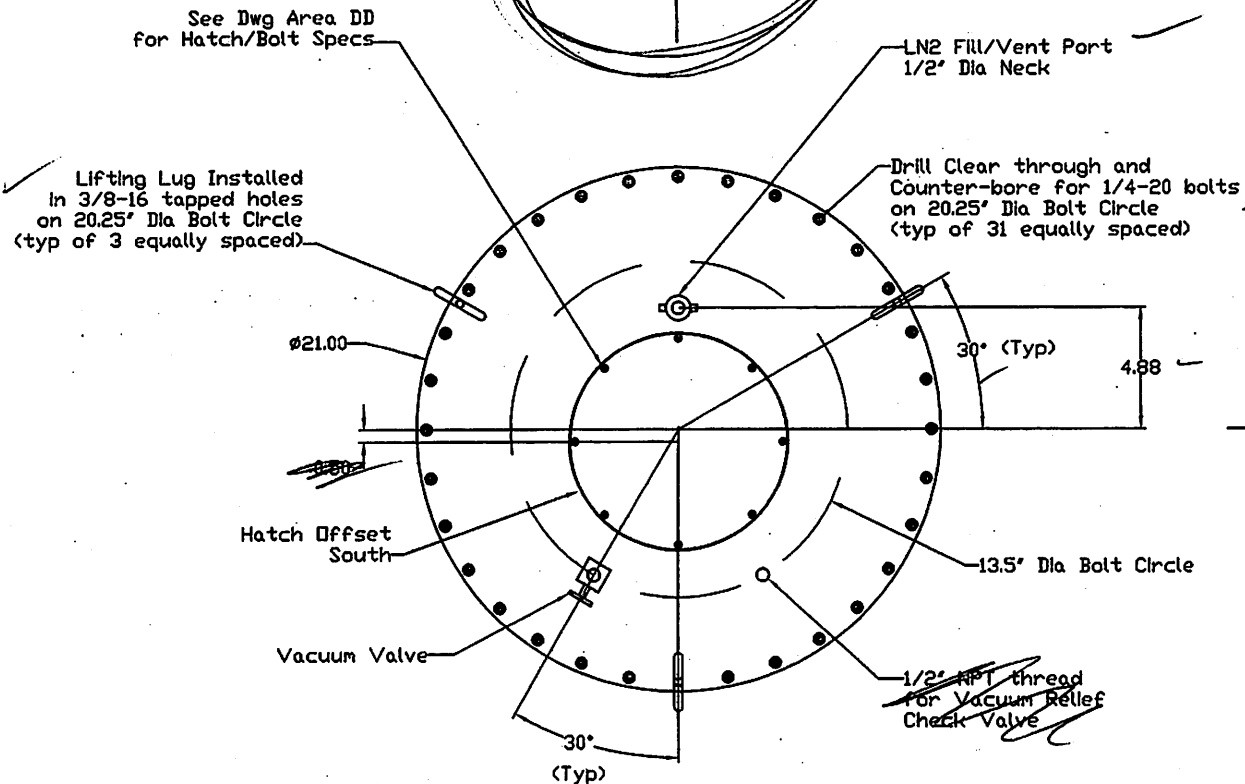
ALCLAD WASHER, 1-EACH

MAT'L :
ALUM / S-S

DETAIL NO. 061501-65



NOTES:



Section EE

ITEM	DWG. NO.	DESCRIPTION	QUANTITY			REMARKS
			G1	G2	G3	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		WIRC Cornell University Center for Radiophysics and Space Research - Ithaca, NY 14853-6				
TOLERANCES: XXX±.010 XXX±.005 ANGLES ±0.5° ALL SURFACES 125		DRAWN: ICW CHECKED: STRESS: APPROVED:	DATE: 05/07/91 TITLE: Dewar Top Flang	SIZE: DRAWING # SCALE: DATE:		