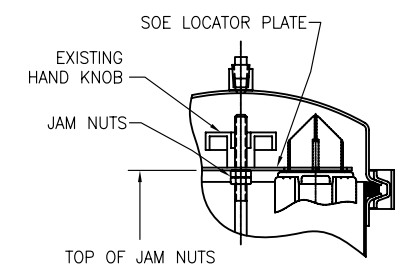
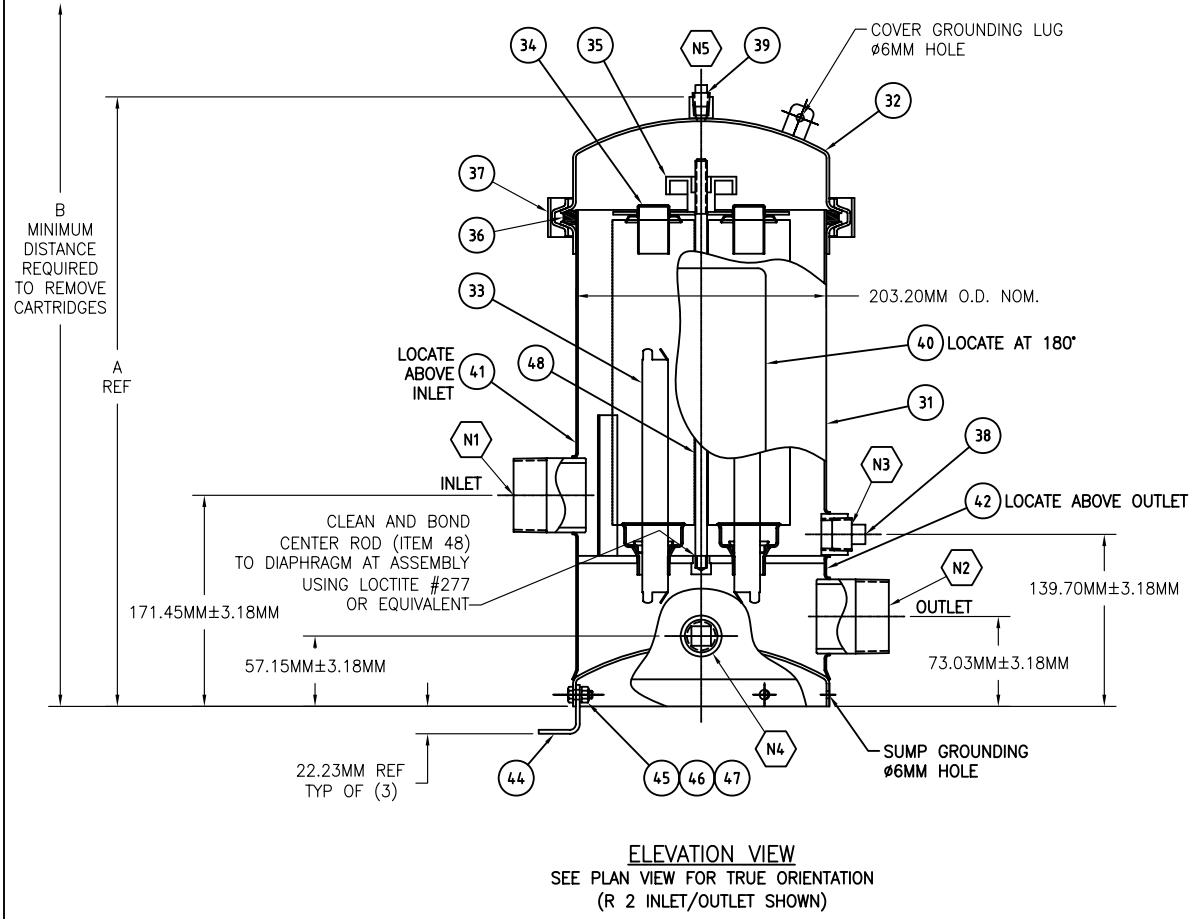
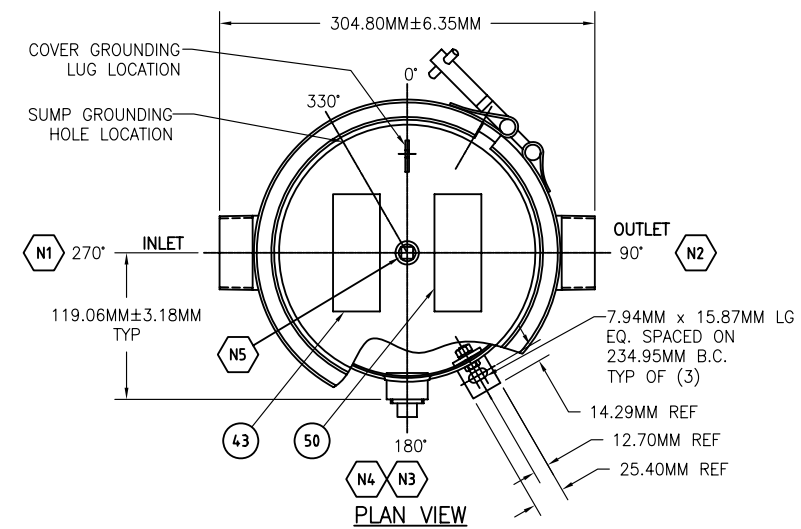


REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
~	FIRST RELEASE	PAG 09/21/09	
A	FIRST RELEASE, NPR 8784	PAG 05/19/10	

- NOTES:
- MATERIAL: ALL WELDED PARTS TO BE 316L STAINLESS STEEL EXCEPT AS FOLLOWS:
COVER GASKET - NITRILE, HAND KNOB - POLYPROPYLENE W/ 303 SST INSERT, CLAMP - SST, PEDESTALS - 316 SST, AND SEAL PLATE ASSEMBLY - 316 SST
 - ALL HOUSINGS TO BE PNEUMATICALLY PRESSURE TESTED FOR LEAKS @ 1.4 BAR PER 3M PURIFICATION INC ENGINEERING SPECIFICATION 430.028. SEMIANNUALLY A COMPLETED HOUSING IS TO BE HYDROSTATICALLY PRESSURE TESTED FOR LEAKS @ 13.4 BAR (1.3 X'S THE DESIGN PRESSURE) PER 3M PURIFICATION INC ENGINEERING SPECIFICATION 430.028.
 - SURFACE FINISH REQUIREMENTS:
EXTERIOR - WELDS WILL REMAIN IN THE "AS-WELDED" CONDITION WITH STAIN REMOVED PER 3M PURIFICATION INC ENGINEERING SPECIFICATION TS-0496.
INTERIOR - WELDS WILL REMAIN IN THE "AS-WELDED" CONDITION AND ALL ACCESSIBLE WELDS TO HAVE WELD STAIN REMOVED PER 3M PURIFICATION INC ENGINEERING SPECIFICATION TS-0496.
ALL EXTERIOR SURFACES TO BE ELECTRO POLISHED EXCEPT THE PLUGS, CLAMP, LEGS, AND CLAMP AND LEG HARDWARE.
REMOVABLE INTERNAL PARTS (POST ASSEMBLIES, HAND KNOB, CENTER ROD AND PRESSURE PLATE ASSEMBLY) ARE NOT ELECTRO POLISHED.
 - UNIT AS SUPPLIED DESIGNED FOR DOUBLE OPEN ENDED (DOE) STYLE CARTRIDGES. TO CONVERT TO A SINGLE OPEN ENDED (SOE) WITH 222 O-RING STYLE CARTRIDGES (ORDER KIT PER BILL OF MATERIAL) REMOVE THE PRESSURE PLATE ASSEMBLY (ITEM 34) AND POST ASSEMBLIES (ITEM 33). INSTALL JAM NUTS ONTO THE CENTER ROD (ITEM 48) AS SHOWN IN THE LOCATION VIEW AND USE THE LOCATOR PLATE SUPPLIED IN THE OPTIONAL SOE KIT.
 - OPTIONAL GASKET MATERIAL AVAILABLE: ETHYLENE PROPYLENE RUBBER (EPR) P/N: 3756437
FLUOROCARBON RUBBER (VITON) P/N: 3756434
SILICONE P/N: 3756440
 - THIS VESSEL HAS BEEN DESIGNED IN COMPLIANCE WITH ARTICLE 3.3 OF THE EUROPEAN PRESSURE EQUIPMENT DIRECTIVE 97/23/CE. THE USER OF THIS VESSEL MUST ENSURE THAT IT IS OPERATED AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF THIS DIRECTIVE AND WITH ANY EXCEPTIONS AS SPECIFIED BY 3M PURIFICATION INC.
 - THIS VESSEL HAS BEEN DESIGNED IN COMPLIANCE WITH THE EUROPEAN ATEX DIRECTIVE 94/9/EC 11/2/G/T4. THE USER OF THIS VESSEL MUST ENSURE THAT IT IS OPERATED AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF THIS DIRECTIVE AND WITH ANY EXCEPTIONS AS SPECIFIED BY 3M PURIFICATION INC.



- TOP OF JAM NUTS FROM TOP OF DIAPHRAGM PLATE
- 1 HIGH = 290.51MM +1.59MM -0MM
 - 2 HIGH = 538.16MM +1.59MM -0MM
 - 3 HIGH = 785.81MM +1.59MM -0MM
 - 4 HIGH = 1033.46MM +1.59MM -0MM

LOCATION VIEW FOR OPTIONAL SINGLE OPEN END (SOE) KIT
SEE NOTE 4

DESIGN CONDITIONS	
DESIGN CODE	
ASME CODE STAMP	NOT REQUIRED
HOUSING M.A.W.P.	10.3 BAR/FULL VACUUM -1.0 BAR
HOUSING DESIGN TEMPERATURE	121.1° C
HOUSING M.D.M.T.	-29.9° C
HYDROSTATIC PRESSURE TEST	REQUIRED PER 2
LIQUID PENETRANT TESTING	NOT REQUIRED
POST WELD HEAT TREAT	NOT REQUIRED
CORROSION ALLOWANCE	NONE
RADIOGRAPHY	NOT REQUIRED
LETHAL SERVICE	NO

FINISH REQUIREMENTS	
INTERIOR	PER NOTE 3
EXTERIOR	PER NOTE 3
EXTERIOR PAINT	NONE

NOZZLE SCHEDULE							
I.D.	QTY.	SIZE	RATING	TYPE	NECK THK.	SERVICE	REMARKS
N1	1	-	-	PIPE	SCH 40S	INLET	SEE CATALOG NO. TABLE FOR SIZE & TYPE
N2	1	-	-	PIPE	SCH 40S	OUTLET	SEE CATALOG NO. TABLE FOR SIZE & TYPE
N3	1	3/4 NPT	3000#	COUPLING		SLUDGE DRAIN	TAPERED PIPE THDS PER ASME B1.20.1
N4	1	3/4 NPT	3000#	COUPLING		CLEAN DRAIN	TAPERED PIPE THDS PER ASME B1.20.1
N5	1	1/4 NPT	3000#	COUPLING		VENT	TAPERED PIPE THDS PER ASME B1.20.1

52	1	DIRECTIVE ATEX 94/9/EC	LITOPSATEX	
51	1	INSTALLATION MANUAL	LITOPSDS	
50	1	LABEL - ATEX		
49	OPT	KIT - SOE CARTRIDGE STYLE	9885502	316 SST-NOT SUPPLIED ORDER SEPARATELY-SEE NOTE 4
48	1	ROD - CENTER	60447	SEE DWG. FOR COMPLETE PART NUMBER
47	3	LOCK WASHER	6655638	1/4 NOM. 18-8 SST
46	3	HEX NUT	3126432	1/4-20 UNC-2B 304 SST
45	3	HEX HEAD SCREW	3258932	1/4-20 304 SST
44	3	LEG	6501231	
43	1	LABEL - CAUTION	6680631	
42	1	LABEL - OUTLET	6501332	
41	1	LABEL - INLET	6501331	
40	1	LABEL - 3M PURIFICATION INC PRODUCT		SEE DWG. FOR COMPLETE PART NUMBER
39	1	PIPE PLUG	63292	1/4" NPT - SEE DWG. FOR COMPLETE PART NUMBER
38	2	PIPE PLUG	63292	3/4" NPT - SEE DWG. FOR COMPLETE PART NUMBER
37	1	CLAMP	6047331	
36	1	GASKET	3792031	NITRILE-FOR OPTIONAL GASKET MATERIALS SEE NOTE 5
35	1	HAND KNOB	6710501	
34	1	PRESSURE PLATE ASSEMBLY	64532	SEE DWG. FOR COMPLETE PART NUMBER
33	5	POST ASSEMBLY	66817	SEE DWG. FOR COMPLETE PART NUMBER
32	1	COVER WELDMENT	37872	SEE DWG. FOR COMPLETE PART NUMBER
31	1	SUMP WELDMENT	74218	SEE DWG. FOR COMPLETE PART NUMBER
ITEM	QTY.	DESCRIPTION	DWG. NO.	REMARKS

BILL OF MATERIAL				
UNLESS OTHERWISE SPECIFIED: BREAK EDGES - - - - - ~	BY PAG	DATE 09/21/09	3M Purification Inc. FILTER ASSEMBLY - MODELS 05DS	
MACHINED SURFACES - - - - - ✓	CHECKED	APRVD		
THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR PRIVILEGED INFORMATION WHICH IS THE PROPERTY OF 3M PURIFICATION INC. OR ITS DESIGNATED ENTITY AND IS SUBMITTED FOR USE ONLY IN CONNECTION WITH PROPOSED OR AUTHORIZED WORK. THE INFORMATION ON THIS DOCUMENT SHALL NOT BE USED, COPIED, DISCLOSED, DISSEMINATED OR DISTRIBUTED WITHOUT WRITTEN CONSENT AND THIS DOCUMENT AND ALL COPIES SHALL BE RETURNED UPON REQUEST. ©2010, 3M COMPANY, ALL RIGHTS RESERVED.	DATE ISSUED:			
CATALOG NO.	MODEL	MATERIAL	DRY WEIGHT	REMARKS
4816604	05DS4	316L SST SEE NOTE 1	15.0 KG	BRITISH STD. EXTERNAL TAPERED PIPE THREAD PER BS 21
4816603	05DS3	316L SST SEE NOTE 1	12.7 KG	BRITISH STD. EXTERNAL TAPERED PIPE THREAD PER BS 21
4816602	05DS2	316L SST SEE NOTE 1	10.9 KG	BRITISH STD. EXTERNAL TAPERED PIPE THREAD PER BS 21
4816601	05DS1	316L SST SEE NOTE 1	8.6 KG	BRITISH STD. EXTERNAL TAPERED PIPE THREAD PER BS 21
SIZE	CODE IDENT. NO.	DRAWING NO.		
D	15472	48166		
SCALE: 1/3	MODEL:	SHEET: 1 OF 1		

CATALOG NO.	MODEL	MATERIAL	INLET/OUTLET CONN.	A	B	DRY WEIGHT	REMARKS
4816604	05DS4	316L SST SEE NOTE 1	R 2 BSPT SCH 40S	1257.3 MM	2184.4 MM	15.0 KG	BRITISH STD. EXTERNAL TAPERED PIPE THREAD PER BS 21
4816603	05DS3	316L SST SEE NOTE 1	R 2 BSPT SCH 40S	1003.3 MM	1676.4 MM	12.7 KG	BRITISH STD. EXTERNAL TAPERED PIPE THREAD PER BS 21
4816602	05DS2	316L SST SEE NOTE 1	R 2 BSPT SCH 40S	749.3 MM	1168.4 MM	10.9 KG	BRITISH STD. EXTERNAL TAPERED PIPE THREAD PER BS 21
4816601	05DS1	316L SST SEE NOTE 1	R 1 1/2 BSPT SCH 40S	495.3 MM	660.4 MM	8.6 KG	BRITISH STD. EXTERNAL TAPERED PIPE THREAD PER BS 21