



NOTES:

- MATERIAL: ALL WETTED PARTS TO BE 316L STAINLESS STEEL EXCEPT AS FOLLOWS: COVER GASKET - NITRILE; SLEEVE - NYLON; RETAINING RING - PH 15-7 MO SST; SPRING AND PLATE ASSEMBLIES - 316/316L SST; PEDESTALS - 316 SST AND HEX JAM NUTS - 18-8 SST ALL NON-WETTED PARTS TO BE 304/304L STAINLESS STEEL
- ALL HOUSINGS 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.  
REMOVABLE INTERNAL PARTS (POST ASSEMBLIES, NUT WELDMENT, CENTER ROD, SLEEVE AND RETAINING RING) 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 REMOVE THE PRESSURE PLATE ASSEMBLY (ITEM 40, 41 & 42) AND POST ASSEMBLIES (ITEM 43). RELOCATE JAM NUTS (ITEM 48) ONTO THE CENTER ROD (ITEM 45) AS SHOWN IN THE LOCATION VIEW AND USE THE LOCATOR PLATE, SLEEVE AND RETAINING RING SUPPLIED IN THE OPTIONAL SOE KIT.  
OPTIONAL SOE KIT P/N: 9885504 FOR MODELS 12DC2 & SS24 EPE-316L  
OPTIONAL SOE KIT P/N: 9885505 FOR MODELS 12DC3 & SS36 EPE-316L  
OPTIONAL SOE KIT P/N: 9885506 FOR MODELS 12DC4 & SS48 EPE-316L
- OPTIONAL GASKET MATERIAL AVAILABLE: ETHYLENE PROPYLENE RUBBER (EPR) P/N: 3756456  
FLUOROCARBON RUBBER (VITON) P/N: 3756457  
SILICONE P/N: 3756458
- THIS VESSEL HAS BEEN DESIGNED IN COMPLIANCE WITH ARTICLE 3.3 OF THE EUROPEAN PRESSURE 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 EUROPEAN ATEX DIRECTIVE 94/9/EC 11/2/G/T5. 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.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
~	FIRST RELEASE	PAG 09/22/09	
A	FIRST RELEASE, NPR 8784	PAG 05/19/10	

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	100.0° 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	-	-	SLIP-ON FLG		INLET	SEE CATALOG NO. TABLE FOR SIZE & TYPE
N2	1	-	-	SLIP-ON FLG		OUTLET	SEE CATALOG NO. TABLE FOR SIZE & TYPE
N3	1	1/2 NPT	3000#	COUPLING		VENT	TAPERED PIPE THDS PER ASME B1.20.1
N4	1	1 NPT	3000#	COUPLING		SLUDGE DRAIN	TAPERED PIPE THDS PER ASME B1.20.1
N5	1	1 NPT	3000#	COUPLING		CLEAN DRAIN	TAPERED PIPE THDS PER ASME B1.20.1

54	1	DIRECTIVE ATEX 94/9/EC	LITOPSATEX	
53	1	INSTALLATION MANUAL	LITOPSDS	
52	1	LABEL - ATEX		
51	2	PIPE PLUG	64096	1" NPT - SEE DWG. FOR COMPLETE PART NUMBER
50	1	PIPE PLUG	64096	1/2" NPT - SEE DWG. FOR COMPLETE PART NUMBER
49	1	CLEVIS PIN-GROOVED, COVER	6431532	
48	2	NUT-HEX JAM	6605940	18-8 SST
47	1	LABEL - CAUTION	6680631	
46	1	LABEL-3M PURIFICATION INC PRODUCT		SEE DWG. FOR COMPLETE PART NUMBER
45	1	CENTER ROD	60447	SEE DWG. FOR COMPLETE PART NUMBER
44	12	SPRING & PLATE ASSEMBLY	63437	SEE DWG. FOR COMPLETE PART NUMBER
43	12	POST ASSEMBLY	66817	SEE DWG. FOR COMPLETE PART NUMBER
42	1	PRESSURE PLATE	7422231	316L SST
41	1	RETAINING RING	8913939	PH 15-7 MO SST
40	1	SLEEVE	6346832	NYLON
39	1	NUT WELDMENT-ROD	6347903	316L SST
38	7	RETAINING RING-E STYLE	6300043	
37	6	CLEVIS PIN-GROOVED	6431531	
36	6	WASHER-PLAIN	6662673	304 SST
35	6	EYENUT	6431631	304 SST
34	6	EYEBOLT	6431731	304 SST
33	1	GASKET	3756455	NITRILE - FOR OPTIONAL GASKET MATERIALS SEE NOTE 5
32	1	COVER WELDMENT		SEE DWG. FOR COMPLETE PART NUMBER
31	1	SUMP WELDMENT		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.  FILER ASSEMBLY - MODELS 12DS
MACHINED SURFACES - - - - - ✓	CHECKED		
	APRVD		
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			DRAWING NO. 48167
	FORM NO. ENG-088 0398	SCALE: 1/6	MODEL: SHEET: 1 OF 1

CATALOG NO.	MODEL	MATERIAL	INLET/OUTLET CONN.	A	B	C	D (FOR DOE CTGS)	DRY WEIGHT	REMARKS
4816703	12DS4	316L SST PER NOTE 1	ISO PN16 DN80 O1A FLAT FACE SLIP-ON FLANGE	1573.00MM	1722.44MM	2590.80MM	1058.86MM	85 KG	
4816702	12DS3	316L SST PER NOTE 1	ISO PN16 DN80 O1A FLAT FACE SLIP-ON FLANGE	1324.00MM	1473.20MM	2082.80MM	808.04MM	77 KG	
4816701	12DS2	316L SST PER NOTE 1	ISO PN16 DN80 O1A FLAT FACE SLIP-ON FLANGE	1073.00MM	1222.38MM	1574.80MM	558.80MM	69 KG	