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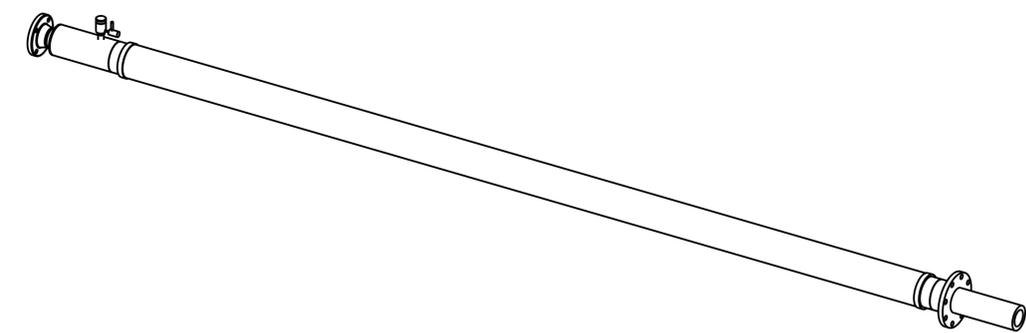
EAR 99 - NO LICENSE REQUIRED  
 THE INFORMATION CONTAINED IN THIS DOCUMENT IS TECHNICAL IN CONTENT, BUT NOT TECHNICAL DATA AS DEFINED BY THE INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR) OR THE EXPORT ADMINISTRATION REGULATIONS (EAR), AND THEREFORE IS EAR 99 NLR, NO EXPORT LICENSE REQUIRED. (GENERAL PROHIBITION SIX (6) (EMBARCOS) APPLIES TO ALL ITEMS SUBJECT TO THE EAR, (I.E. ITEMS ON THE CCL AND WITHIN EAR 99 NLR). YOU MAY NOT MAKE AN EXPORT OR RE-EXPORT CONTRARY TO THE PROVISIONS OF PART 768 (EMBARCOS AND OTHER SPECIAL CONTROLS) OF THE EAR AND 22 CFR PART 126.1 OF THE ITAR).  
 REFERENCE EODR 131902  
 NASA KSC EXPORT CONTROL OFFICE - 321-867-9209

**NOTES:**

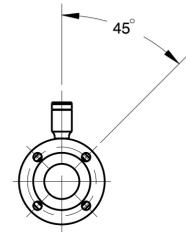
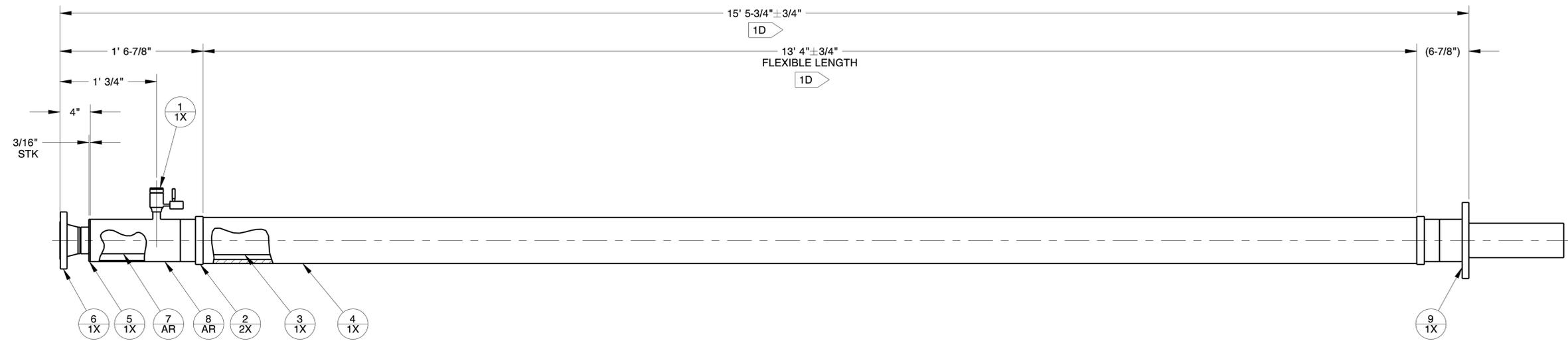
**GENERAL**

- 1A. THIS DRAWING PROVIDES THE PHYSICAL DIMENSIONS AND PARTS LIST FOR PIPE SPOOL ASSEMBLY. REFER TO PROCUREMENT SPECIFICATION K0000190545-SPC FOR TECHNICAL, FABRICATION, TEST AND INSPECTION REQUIREMENTS.
- 1B. PIPE SPOOL REFERENCE DESIGNATOR NUMBER IS 5045.
- 1C. REMOVE SCALE AND BURRS AND BREAK SHARP CORNERS AND EDGES.

1D INDICATED DIMENSIONS ARE AS MEASURED UNDER THE CONDITIONS SPECIFIED IN K0000190545-SPC. PARAGRAPH 4.2.1.2.



**ISOMETRIC**  
SCALE .063



SOME ITEMS REMOVED

QTY	ZONE	FIND NO OR ITEM NO	MFR CODE	PART OR STOCK NO	DESCRIPTION
1	9	22264	KT00389-03D0005D00	CRYOGENIC MALE BAYONET, FLANGED, 3X5	
AR	8	22264	KT00378-05D00010S4	PIPE	
AR	7	22264	KT00378-03D00010S4	PIPE	
1	6	22264	KT00120-150SS03D00	FLANGE, WELD NECK, B16.5, CLASS 150	
1	5	22264	K000068031-P004	PLATE	
1	4	22264	K000068031-P003	FLEXIBLE HOSE, 5 INCH	
1	3	22264	K000068031-P002	FLEXIBLE HOSE, 3 INCH	
2	2	22264	K000068031-P001	PIPE TO HOSE TRANSITION, 3X5	
1	1	22264	79K14672-3	ASSEMBLY, VACUUM VALVE	

**PROCUREMENT CONTROL DRAWING**

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED ONLY BY THE DESIGN ACTIVITY.		UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. INTERPRET DIM AND TOL PER ASME Y14.5-2009. TOLERANCES ON:		ORIGINAL DATE OF DRAWING (YYYY/MM/DD) 2013/08/16		JOHN F. KENNEDY SPACE CENTER, NASA KENNEDY SPACE CENTER, FLORIDA	
SOFTWARE	CREO PARAMETRIC 2.0	FRACTIONS	DECIMALS	ANGLES	DRAFTSMAN	CHECKER	<b>FLEX HOSE 3 X 5, VACUUM JACKETED, LIQUID OXYGEN BLEED</b>
FILENAME	K0000068031D	± 1/16	1 PL ± .1 2 PL ± .03 3 PL ± .010	± 1°	S. A. BRYANT	J. T. POLLOCK	
MATERIAL	NOTED	THIRD ANGLE PROJECTION		ENGINEER	F. B. TRIMBOLI	L. C. KAYLOR	
HEAT TREATMENT	NONE	K000084129	SLS ML	ENGINEER	V. J. WARD	L. C. KAYLOR	
FINAL PROTECTIVE FINISH	NONE	NEXT ASSY	USED ON	ENGINEER	C. T. O'CONNOR		SUBMITTED T.O. ADAMS APPROVED A.C. LITTLEFIELD
APPLICATION		SIZE D CAGE CODE 22264 DWG NO K000068031 SCALE .125 UNIT WEIGHT 182.86 SHEET 1 OF 1					