NOTES CONTINUED:

Ⓢ SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER AND REVISION ON NOTED SURFACE FOLLOWED ON THE NEXT LINE BY A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: DXXXXXXX-VY, S/N 001. A VIBRATORY TOOL MAY BE USED.

6. APPROXIMATE WEIGHT = X.XXX LB.

7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH, USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364

8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.

9. ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELI-COIL PRODUCT CATALOG, HC2000, REV 4

10. ALL HELI-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL, AFTER DELIVERY OF FINISHED PARTS, USE NITRONIC 60 THREADED INSERTS.

11. ALL MATERIAL IS TO BE VIRGIN MATERIAL (i.e. NO WELD REPAIRS, PLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-E0900364.

12. SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER, FREE FROM SCRATCHES OR GOUGES.

13. PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E1000083 AFTER FABRICATION. THE INDICATED HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING TO APPROXIMATELY 2.5-3X HOLE DIAMETER CENTERED ON BOTH SIDES OF THE HOLE.

14. DIMENSIONS APPLY BEFORE PORCELAIN COATING UNLESS SPECIFIED.

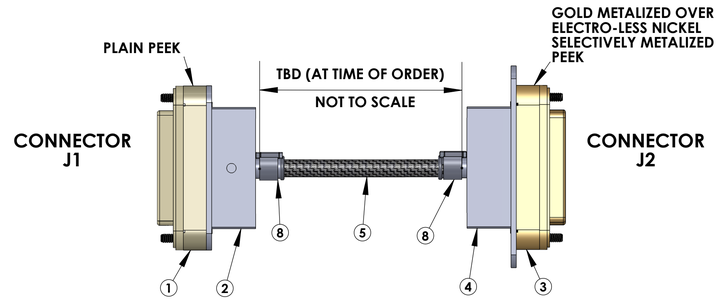
15. BEND RADIUS: UNLESS OTHERWISE NOTED, THE BEND RADIUS SHOULD BE THE MINIMUM REQUIRED TO FORM WITHOUT CRACKING OR REQUIRING ADDITIONAL WORK WHEN FORMING. IN PARTICULAR IF SHEET METAL IS TO BE PORCELAIN COATED, THE BEND RADIUS SHALL BE A MINIMUM OF .12" OUTSIDE RADIUS OF BEND UNLESS OTHERWISE NOTED.

NOTES 9, 10, 13 and 14 DO NOT APPLY TO THIS PART

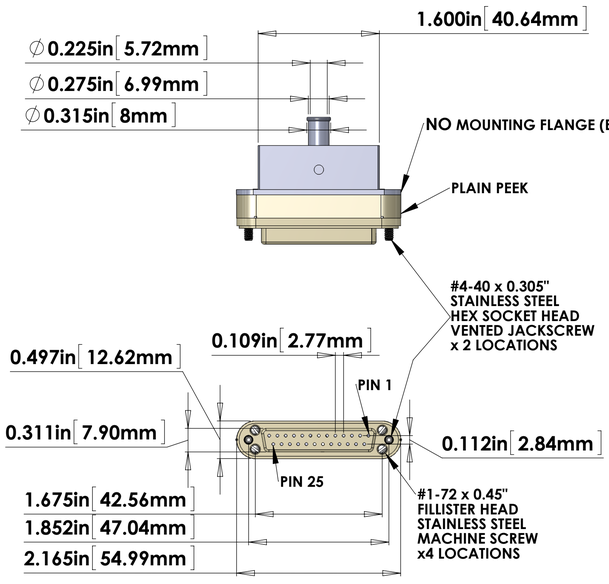
REV.	DATE	DCN #	DRAWING TREE #

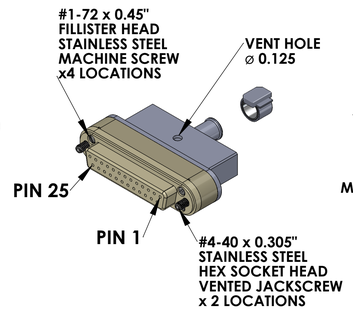
STANDARD CABLE LENGTH CHART

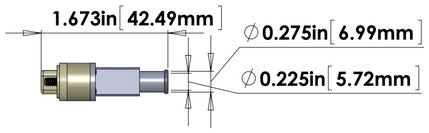
DESIGNATOR	INCHES	FEET and INCHES
V25A-156	156	13 ft.
V25A-108	108	9 ft.
V25A-180	180	15 ft.
V25A-199	199	16 ft. 7 in.
V25A-209	209	17 ft. 5 in.
V25A-230	230	19 ft. 2in.
V25A-TBD	TBD * ADDITIONAL CUSTOM LENGTHS	* LENGTH To Be Determined AT TIME OF ORDER



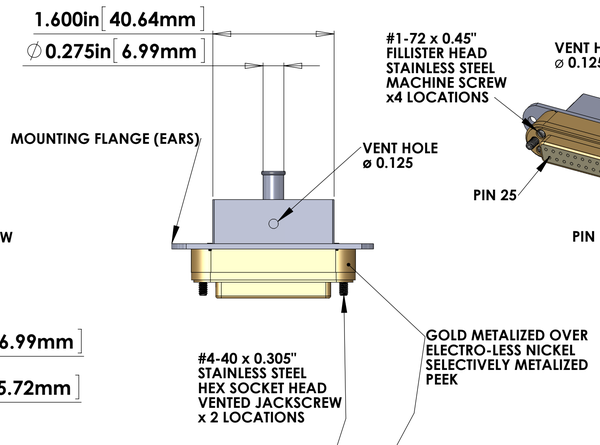
CONNECTOR J1

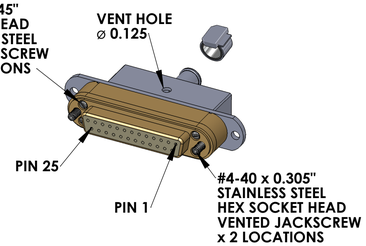


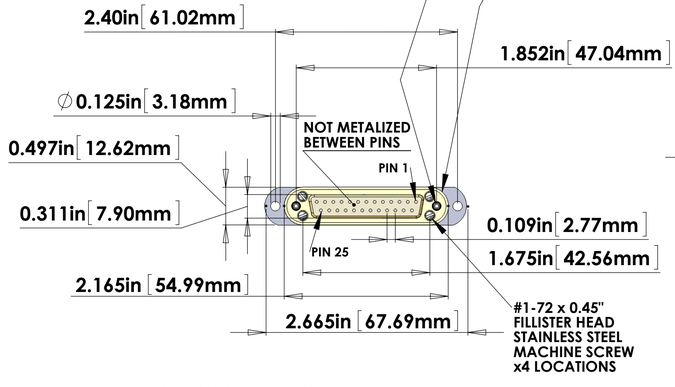


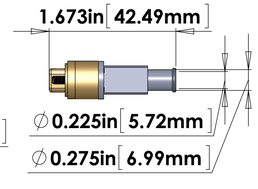


CONNECTOR J2



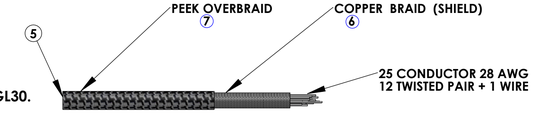






ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
①	TICOR # (TS0148-25C020BS1-225) OR EQUIVALENT	DB25 FEMALE CONNECTOR (J1) FOR UHV (PEEK)	1	
②		DB25 CONNECTOR BACKSHELL (NO EARS) FOR UHV (STAINLESS)	1	
③	TICOR # (TS0148-25CG20BS1-225) OR EQUIVALENT	DB25 FEMALE CONNECTOR (J2) FOR UHV (GOLD METALIZED PEEK)	1	
④		DB25 CONNECTOR BACKSHELL (WITH EARS) FOR UHV (STAINLESS)	1	
⑤	C1	25 COND. (12 TW PAIR + 1 WIRE + SHIELD) CABLE WITH ⑥ COPPER BRAID (SHIELD) AND ⑦ PEEK OVERBRAID	1	VARIOUS LENGTHS* see STANDARD CABLE LENGTH CHART
⑥	CONTINENTAL PART #24x3x40BC	COPPER BRAID - CONTINENTAL CORDAGE PART #24x3x40BC	1	
⑦	PART #6759	PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT	1	
⑧	GLENAIR # 600-052 or BAND-IT # A10086	GLENAIR # 600-052 STANDARD BRAID CLAMP or BAND-IT PART # A10086 (0.240" WIDE) ("BAG OF 100" # A10089)	2	

* NOTE: USE WHATEVER LENGTH IS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH TO ACHIEVE THE CORRECT OVERALL LENGTHS.



V25A-TBD CABLE ASSEMBLY CIRCUIT SUMMARY
V-DB25 F/S1-TBD-DB25 F/S1

CABLE NAME	COND.-WIRE ID	TWISTED PAIR	LENGTH *	FROM	TO
V25A-TBD	25 COND. CABLE	(12 TOTAL)	TBD in.	Conn. J1	Conn. J2
	W1	SHIELD	TBD in	PIN 1, SHELL	PIN 1, SHELL
	W2	**TP-1**	**TBD in**	**PIN 2**	**PIN 2**
	W14		**TBD in**	**PIN 14**	**PIN 14**
	W3	TP-2	TBD in	PIN 3	PIN 3
	W15		TBD in	PIN 15	PIN 15
	W4	**TP-3**	**TBD in**	**PIN 4**	**PIN 4**
	W16		**TBD in**	**PIN 16**	**PIN 16**
	W5	TP-4	TBD in	PIN 5	PIN 5
	W17		TBD in	PIN 17	PIN 17
	W6	**TP-5**	**TBD in**	**PIN 6**	**PIN 6**
	W18		**TBD in**	**PIN 18**	**PIN 18**
	W7	TP-6	TBD in	PIN 7	PIN 7
	W19		TBD in	PIN 19	PIN 19
	W8	**TP-7**	**TBD in**	**PIN 8**	**PIN 8**
	W20		**TBD in**	**PIN 20**	**PIN 20**
	W9	TP-8	TBD in	PIN 9	PIN 9
	W21		TBD in	PIN 21	PIN 21
	W10	**TP-9**	**TBD in**	**PIN 10**	**PIN 10**
	W22		**TBD in**	**PIN 22**	**PIN 22**
	W11	TP-10	TBD in	PIN 11	PIN 11
	W23		TBD in	PIN 23	PIN 23
	W12	**TP-11**	**TBD in**	**PIN 12**	**PIN 12**
	W24		**TBD in**	**PIN 24**	**PIN 24**
	W13	TP-12	TBD in	PIN 13	PIN 13
	W25		TBD in	PIN 25	PIN 25

* THE LENGTH SHOWN IN THIS LIST IS THE LENGTH OF THE CABLE BETWEEN THE TWO CONNECTORS. ADD ADDITIONAL LENGTH AS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH.

V-DB25 F/S1-TBD-DB25 F/S1
STANDARD USE FOR THIS CABLE

SUBSYSTEM	AIR/VAC	STANDARD USE
MANY (SEI RESPONSIBLE)	IN-VAC	AIR/VACUUM FLANGE TO TABLE CONNECTION

ELECTRICAL NOTES: (UNLESS OTHERWISE SPECIFIED)

A. MATERIAL:
- a. J1 CONNECTOR SHELL - PEEK VICTREX 450GL30.
- b. J2 CONNECTOR SHELL - GOLD OVER ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK VICTREX 450GL30.
- c. BACKSHELLS - STAINLESS STEEL WITH VENT HOLE.
- d. CONTACTS - BERYLLIUM COPPER ALLOY C17300
  0.000050 MIN. GOLD OVER NICKEL.
- e. HARDWARE: STAINLESS STEEL, PASSIVATED.
- f. PEEK BRAID - PEEK VICTREX GRADE TDS-450CA30 CARBON LOADED - SUPPLIED BY LIGO.

B. CABLE 25 COND. 28 AWG, (40 STRD 44 AWG) WITH 2 LAYERS OF KAPTON TAPE.
12 TWISTED PAIRS (4 TO 5 TWISTS PER INCH) + 1 WIRE.
OVERALL 40AWG COPPER BRAID 50% COVERAGE - SUPPLIED BY LIGO.
OVERALL PEEK BRAID MIN. 50% COVERAGE.
OVERALL CABLE O.D. WILL BE 0.240 IN.

C. CONNECTORS WILL BE SUPPLIED WITH HARDWARE. SCREWS SHOULD BE THE PROPER LENGTH FOR MATING.

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

DIMENSIONS ARE IN

TOLERANCES:
.XX ±
.XXX ±

ANGULAR ± °

1. INTERPRET DRAWING PER ASME Y14.5-1994.
2. REMOVE ALL SHARP EDGES, .005-.015. FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELEY R.02 FOR SHEET METAL PARTS.
3. DO NOT SCALE FROM DRAWING.
4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

MATERIAL: Material <not specified>
FINISH: µinch

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM: LIGO
SUB-SYSTEM: MANY
NEXT ASSY

PART NAME: CUSTOM CABLE SPECIFICATION V25A- TBD

DESIGNER	B. ABBOTT	MAY/02/2012	
DRAFTER	E. BROWN	MAY/02/2012	
CHECKER			
APPROVAL			

SIZE: D | DWG. NO.: D1000225 | REV.: v6
SCALE: 1:1 | PROJECTION: | SHEET 1 OF 1