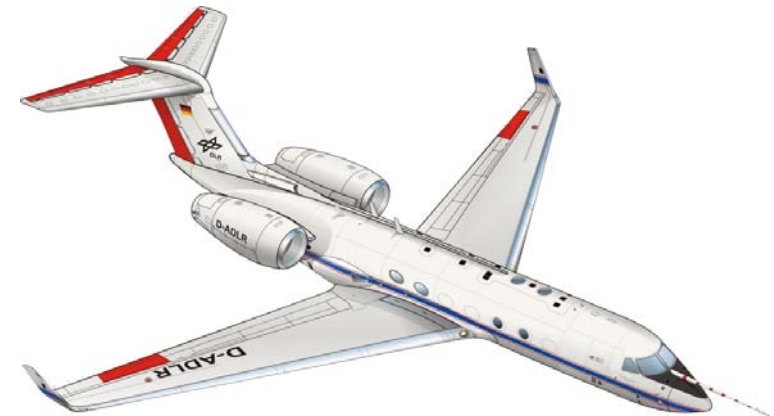


# HALO

Nutzertreffen in OP, 8./9.Okt.07  
H. Brockstieger





## Inhalt

Kabinenplan am Beispiel „OMO“

HALO-Rack

Power-Distribution

Rackinterne Stromverteilung

Mission-Scientist Station

Chemical Exhaust

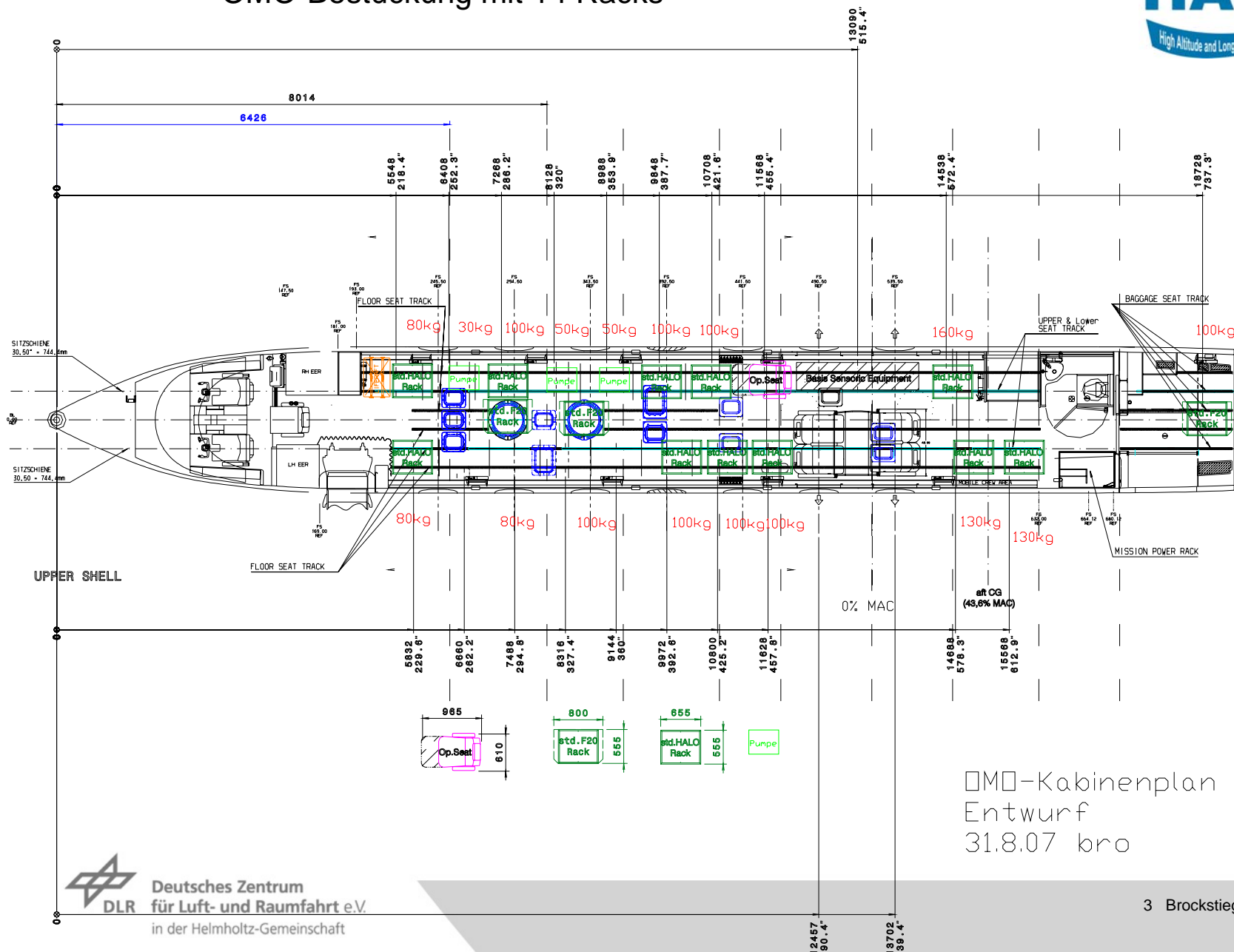
Baggage-Compartment

„Boiler-room“

Tail-Cone

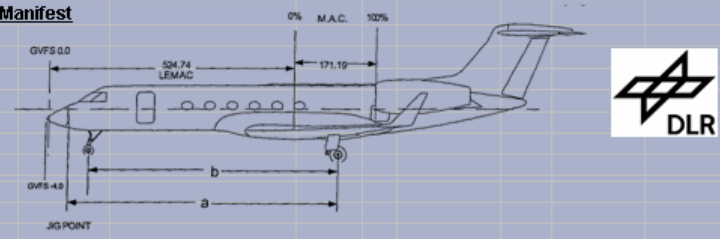


# OMO-Bestückung mit 14 Racks

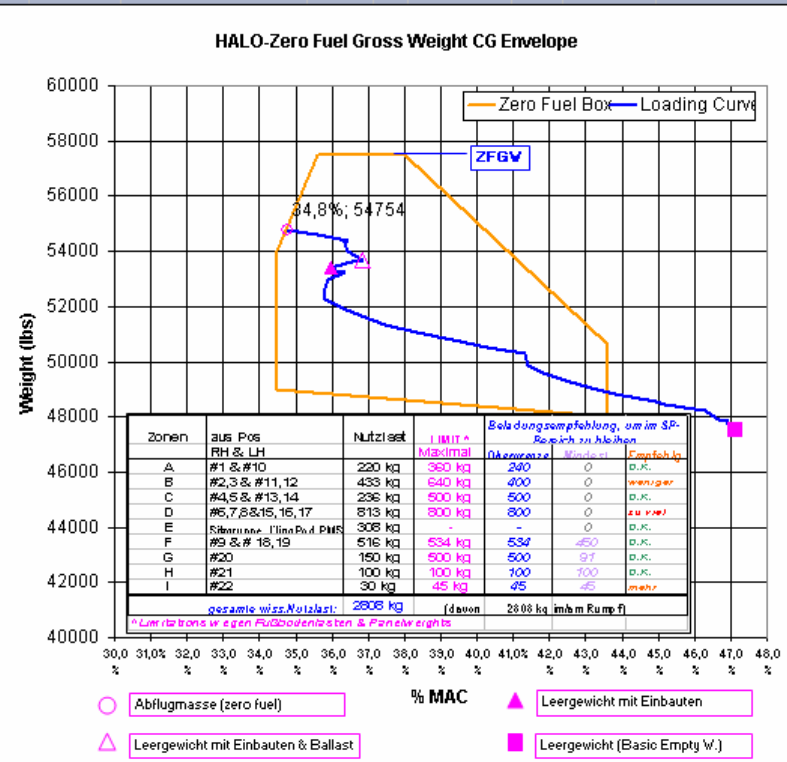


OMO-Kabinenplan  
Entwurf  
31.8.07 bro

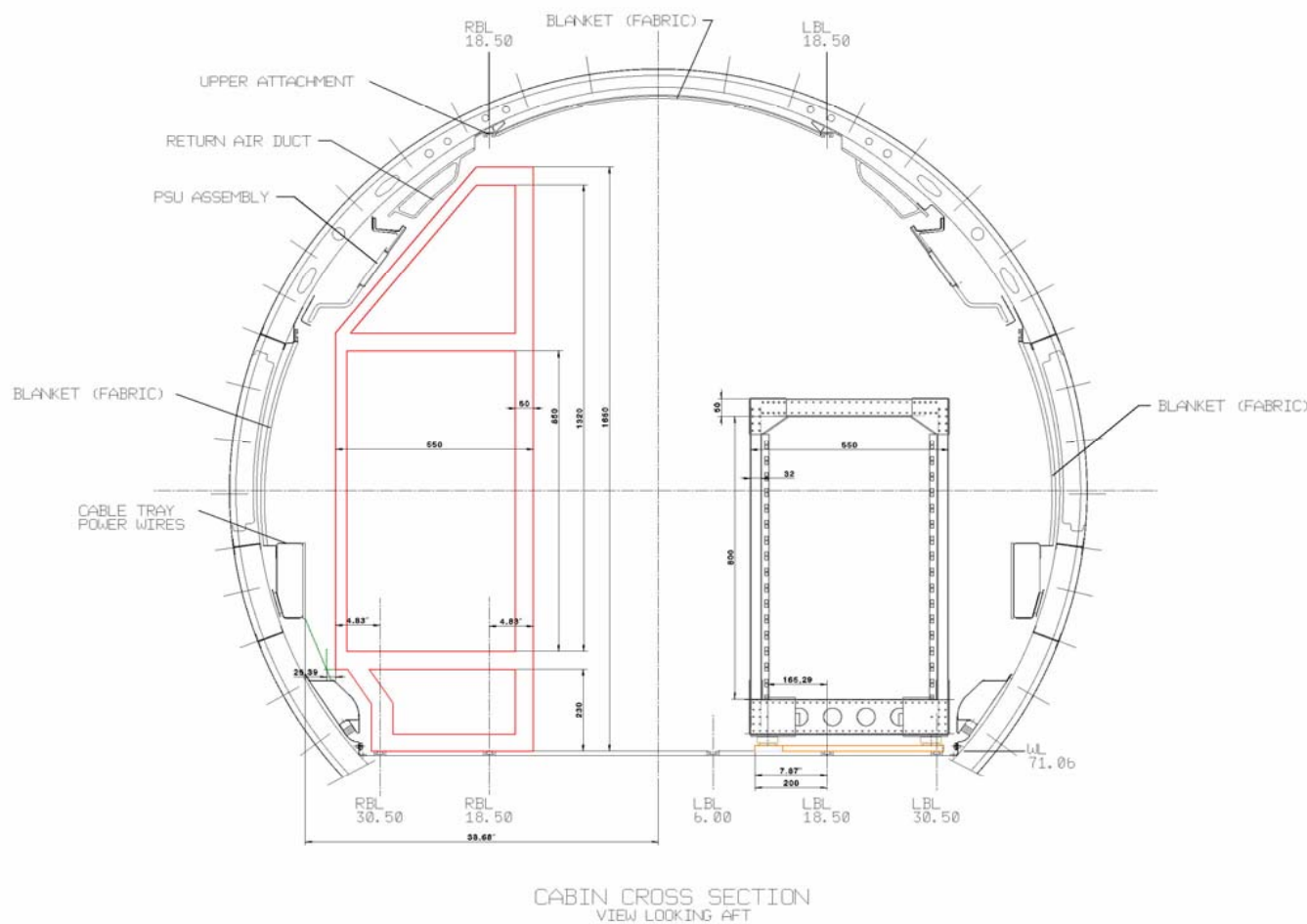
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
1	<b>W&amp;B-Planer-OMO</b>					<b>GV-SP HALO - Zero Fuel Gross Weight CG Envelope</b>															
2						<b>Preliminary Flight Load Manifest</b>															
3	<i>geplante Nutzlast Aug. 07-br</i>																				
4	Pos	Belegung	Geräte / Personen	Rack / Sitz	Masse (inkl. Rack) [kg] [lbs]	Hebel [inch]	Moment [inch lbs]														
5	6	<b>Empty Weight incl. unuseable fuel etc.**</b>			21556,0	(47,522)	605,4	28771085													
7	7	2xDouble Seat+4xLife Jacket			93,4	(206)	519,7	107055,1													
8	8	Nasenmast			16,0	(35)	-10,0	-352,7													
9	9	Low Rack (Basis-Sensorik)			150,0	(331)	515,4	170437													
11	11	Rettunginsel hinten (in Galley)			29,5	(65)	620,0	40300,0													
12	12	Rettunginsel hinten (in Galley)			29,5	(65)	620,0	40300													
13	13	1	Rack	80 kg + 30kg	110,0	(243)	218,4	52963													
14	14	2	Pumpe	30 kg + 0kg	30,0	(66)	252,3	16687													
15	15	3	Rack	100 kg + 30kg	130,0	(287)	286,2	82024													
16	16	4	Pumpe	50 kg + 0kg	50,0	(110)	320,0	35273													
17	17	5	Pumpe	50 kg + 0kg	50,0	(110)	353,9	39010													
18	18	6	Rack	100 kg + 30kg	130,0	(287)	387,7	11113													
19	19	7	Rack	100 kg + 30kg	130,0	(287)	421,6	120829													
20	20	8	Operator+Sitz	77 kg + 36kg	113,3	(250)	455,4	113738													
21	21	9	Rack	160 kg + 30kg	190,0	(418)	572,4	239762													
22	22	10	Rack	80 kg + 30kg	110,0	(243)	229,6	55679													
23	23	11	Operator+Sitz	77 kg + 36kg	113,3	(250)	262,2	65550													
24	24	12	Rack / Viewport vorderes	100 kg + 30kg	130,0	(287)	294,8	84489													
25	25	13	Rack / Viewport hinteres	100 kg + 36kg	136,3	(300)	327,4	98370													
26	26	14	Rack	0 kg + 0kg	0,0	(00)	360,0	0													
27	27	15	Rack	100 kg + 30kg	130,0	(287)	392,6	112518													
28	28	16	Rack	100 kg + 30kg	130,0	(287)	425,2	121861													
29	29	17	Rack	120 kg + 30kg	150,0	(331)	457,8	151389													
30	30	18	Rack	130 kg + 30kg	160,0	(353)	578,3	203986													
31	31	19	Rack	130 kg + 36kg	166,3	(367)	612,9	224687													
32	32	20	Rack	100 kg + 20kg	120,0	(265)	737,3	195053													
33	33	21	Ballast in Boil Room Ballast (100kg)		100,0	(220)	835,0	184083													
34	34	22	Ballast in Tail Cone (max 45kg)		30,0	(66)	960,0	63492													
35	35		Belly Pod (leer) + Ventral Fin		0,0	(00)	0,0	0													
36	36		Instrumente im BellyPod in Zonen B&C		0,0	(00)	0,0	0													
37	37	L/H	PMS-Pylon mit Sonden		0,0	(00)	526,0	0													
38	38	R/H	PMS-Pylone mit Sonden		0,0	(00)	526,0	0													
39	39	L/H	Wing Store mit Equipment		0,0	(00)	526,0	0													
40	40	R/H	Wing Store mit Equipment		0,0	(00)	526,0	0													
41	41		Luftelassen mit Apertures in Zone B		30,0	(66)	260,0	17196													
42	42		Luftelassen mit Apertures in Zone D		30,0	(66)	400,0	26455													
43	43	2	x Operators auf aft facing Doppelsitz		154,2	(340)	484,3	164646													
44	44	2	x Operators auf fwd facing Doppelsitz		154,2	(340)	555,1	188740													
45	45		Luggage in baggage compartment		30,0	(66)	725,0	47950													
46	46	<b>gesamte wissenschaftliche Nutzlast:</b>			<b>2808</b>	<b>(6190)</b>															
47	47	<b>Leergewicht mit Einbauten</b>			<b>gesamt:</b>	<b>24682</b>	<b>****</b>	<b>587,1</b>	<b>in</b>	<b>31946364</b>											
48	48	Pers.			MAC	36,4%															
49	49	1	Pilot		77,1	(170)	125,0	21250													
50	50	1	Copilot		77,1	(170)	125,0	21250													
51	51	0	Flight Observer		0,0	(00)	125,0	0													
54	54	<b>Zero Fuel Weight (max. 57 500 lbs)</b>			<b>gesamt:</b>	<b>24836</b>	<b>****</b>	<b>584,2</b>	<b>in</b>	<b>31988864</b>											
55	55	MAC			34,8%																
56	56	** includes operating items, see table "WBframe"																			



Bemerkung: **Weight according status report from March 31, 2006 PRELIMINARY**  
 Estimated Basic Empty Weight 46.878 lbs 605,0 in 47% MAC  
 Estimated Basic Operating Weight 48.177 lbs 599,9 in 44% MAC



**FWD CG-Envelope: 593,8 in 34,5% (ab 54000 lbs zunehmend)**  
**AFT CG-Envelope: 599,4 in 43,6% (ab 50500 lbs abnehmend)**





# Prototyp HALO- Rack ohne Untergestell

geplante  
„payload“:  
150 kg



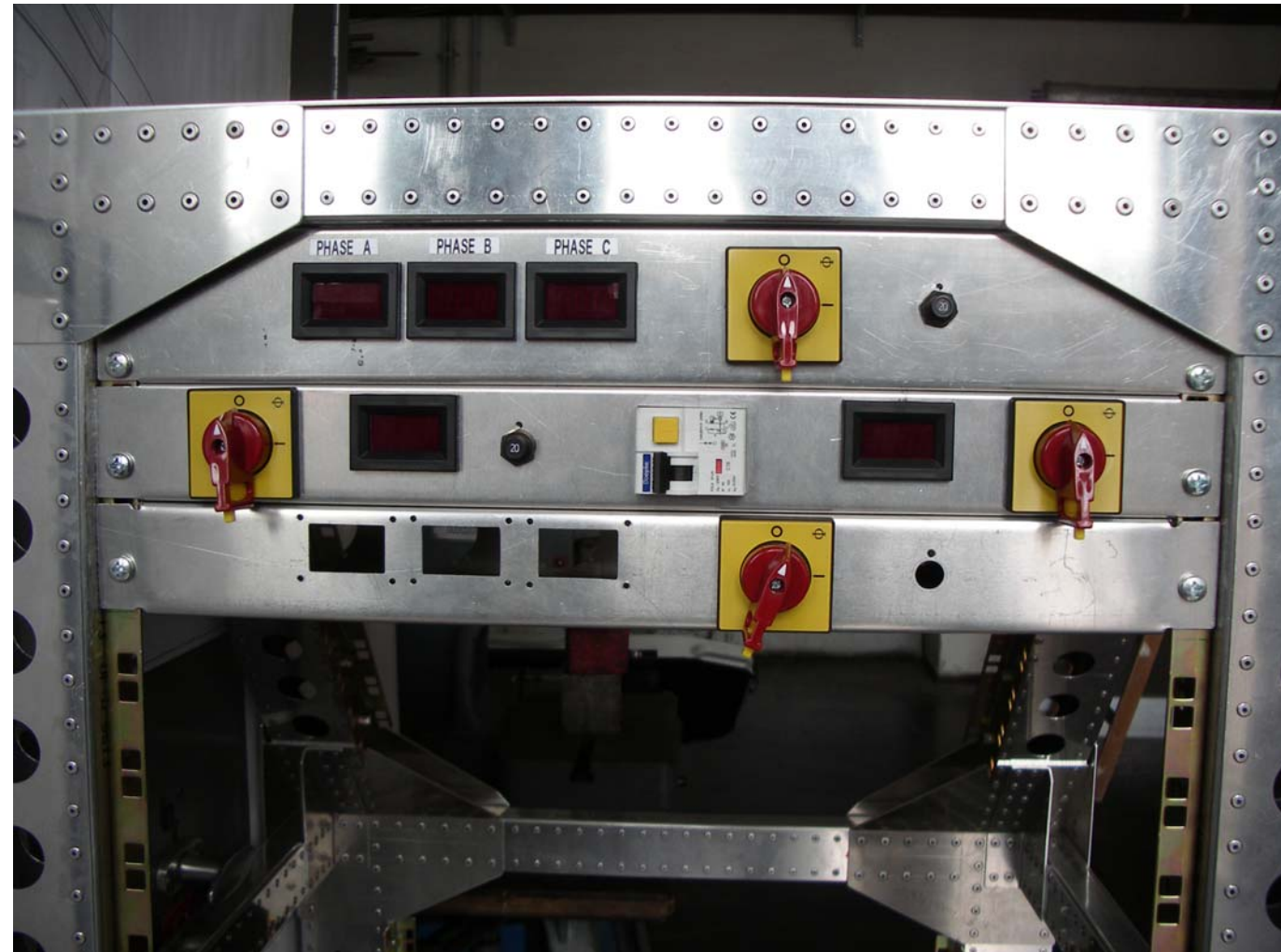
Elektrik-Verteilung  
im Rack:

115V-400Hz-3ph

28VDC

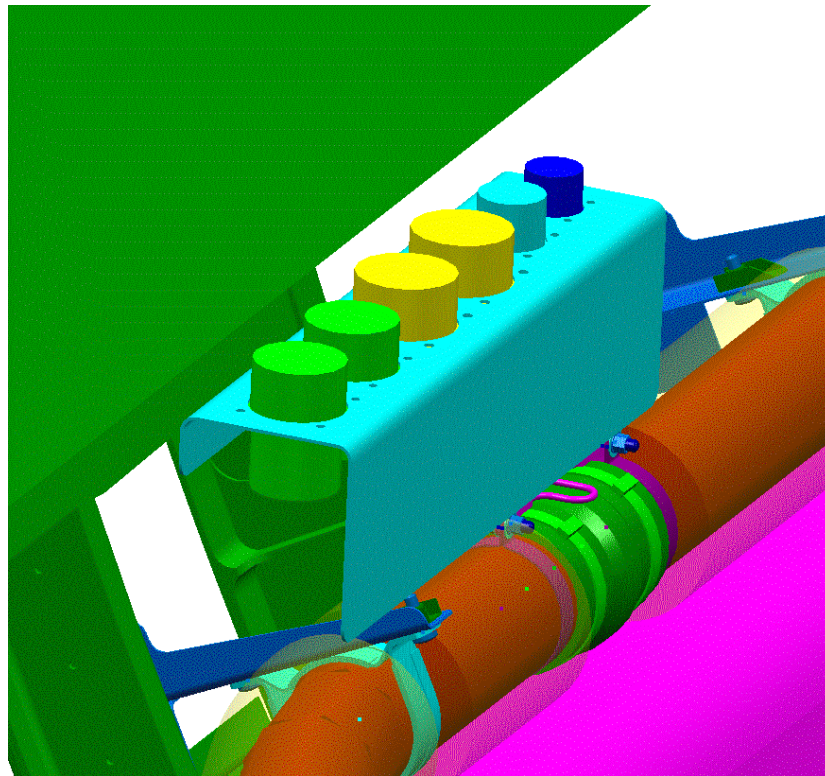
230V-50Hz

Einrüstung je nach  
Bedarf und an anderer  
Position möglich

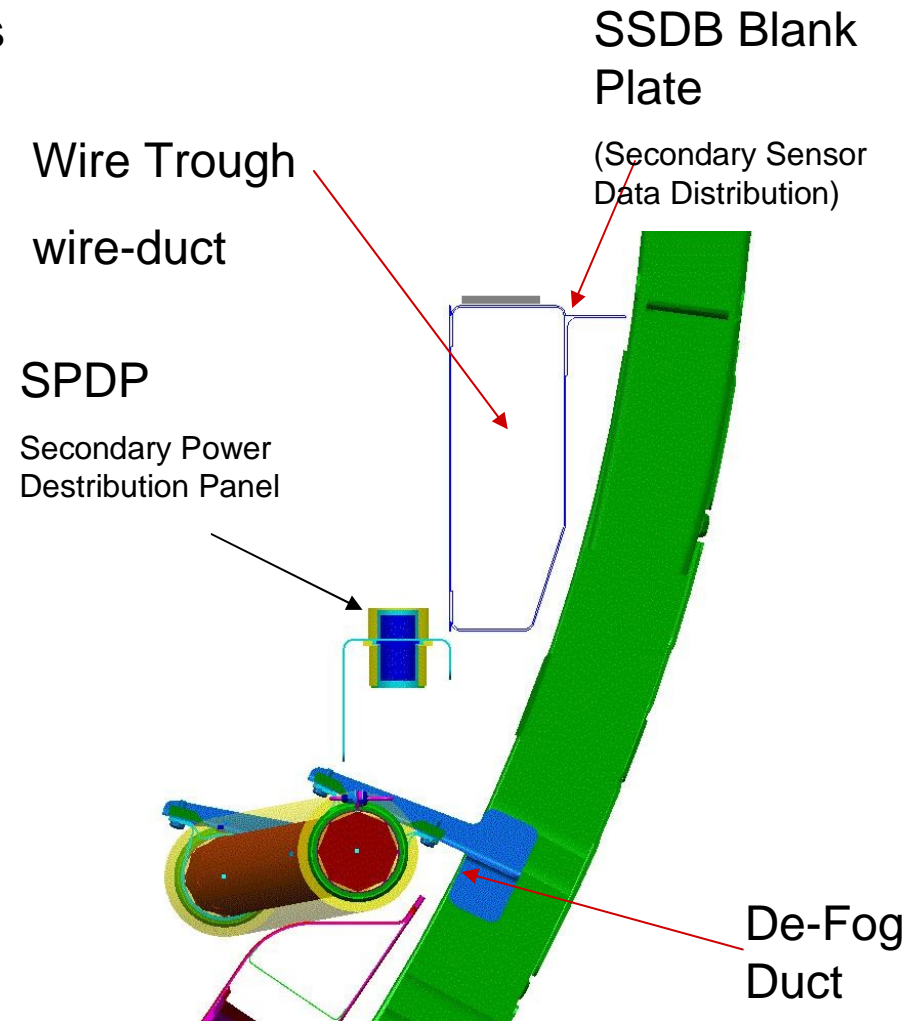


# SPDP/SSDB in Cabin

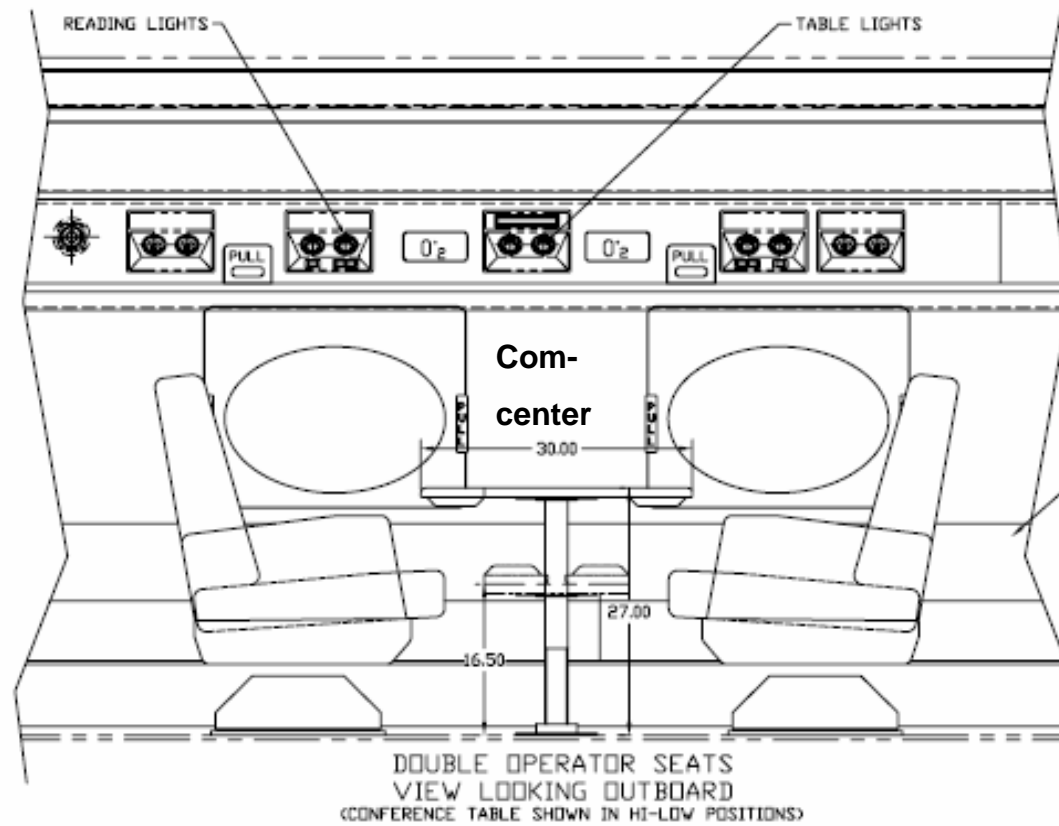
- Single Row of Connectors Provides Clearance for Experimental Racks



View looking Aft, LHS

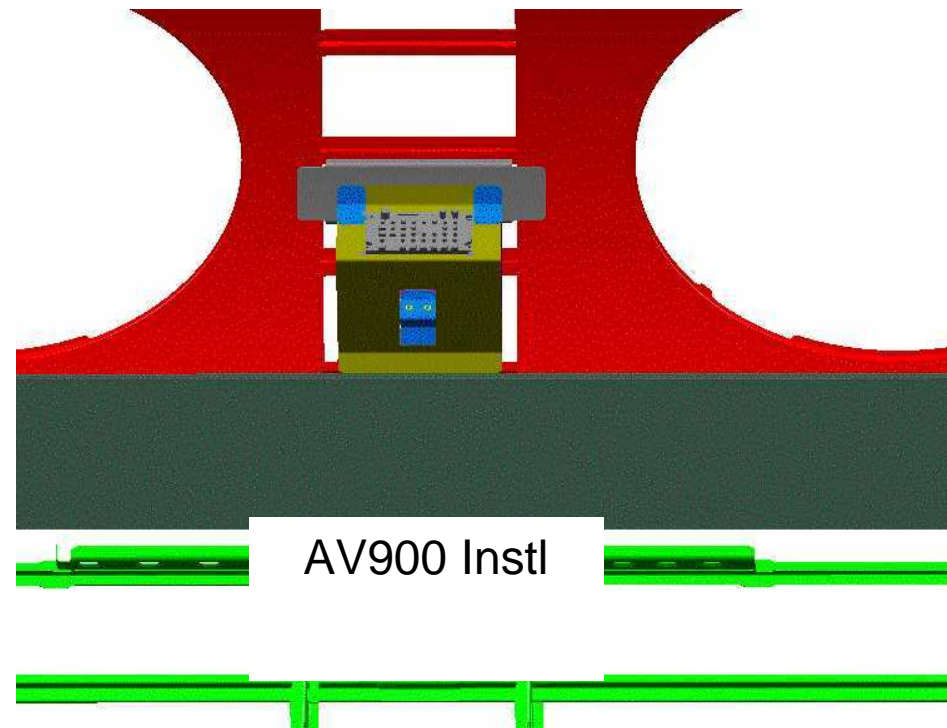
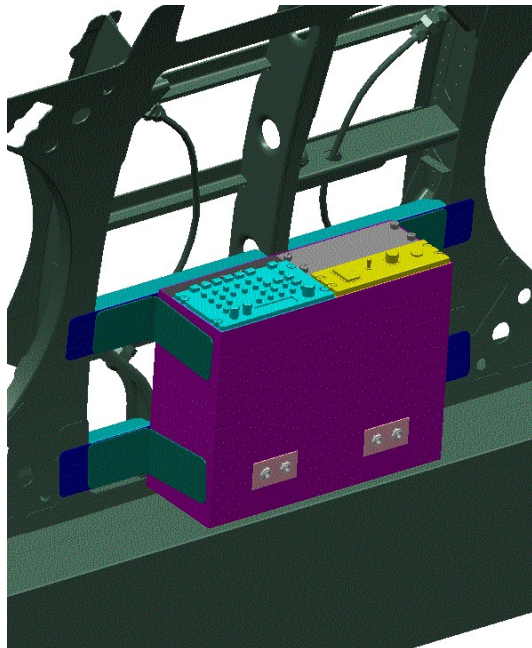


# Mission-Scientist Station



## Headphone Jacks, AV900

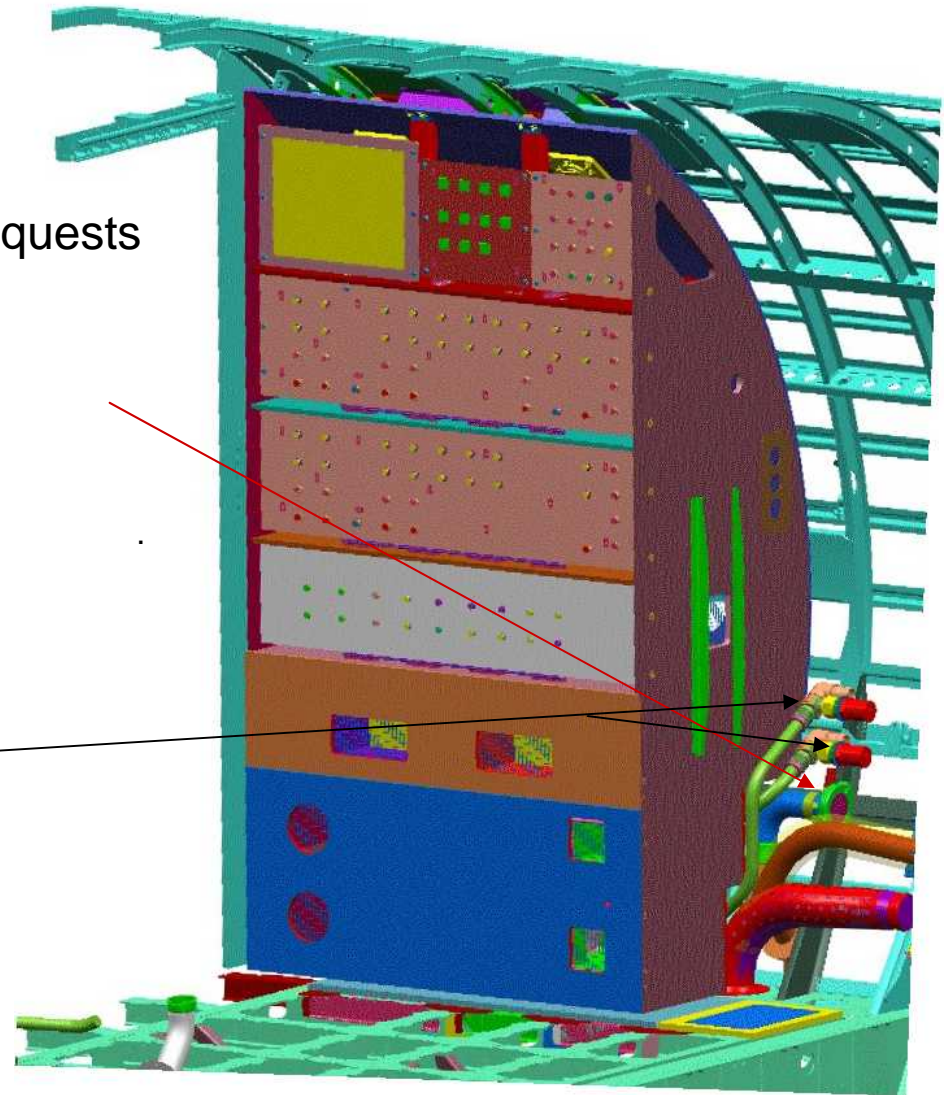
- Locations are LH and RH between 1st and 2nd also 3rd and 4th window
- Space Available for Iridium/SATCOM Handsets



## Research Exhaust Ducts

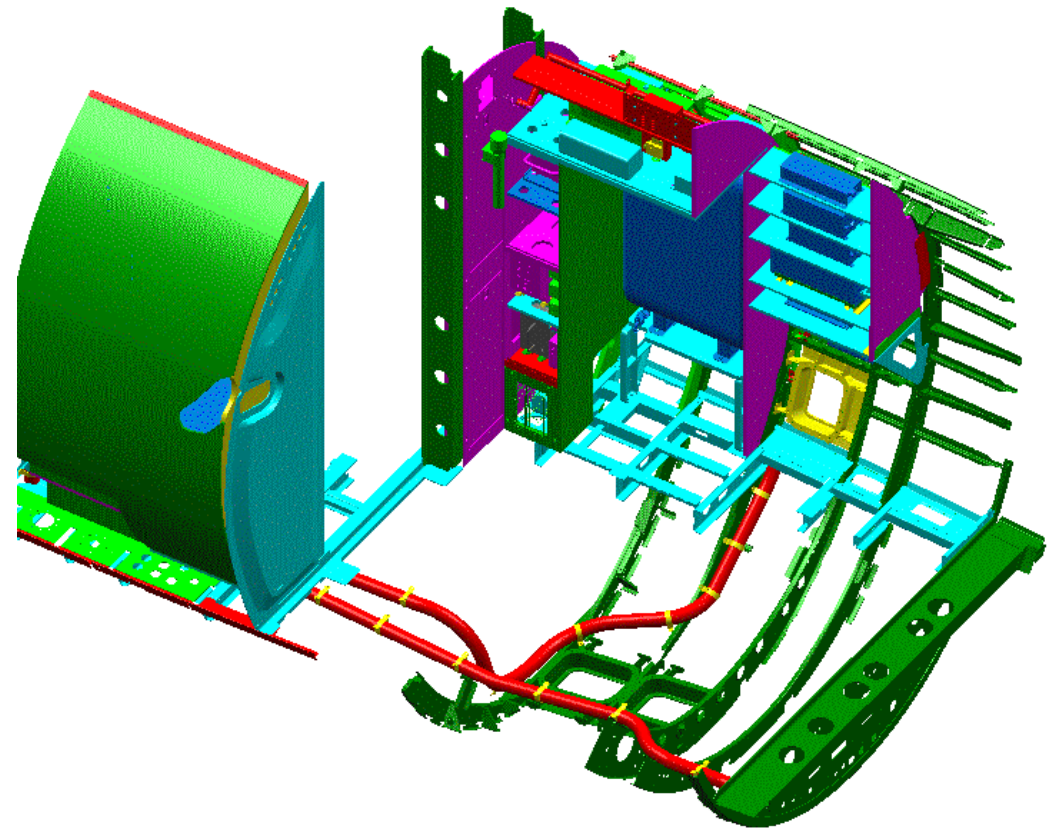
- Internal Ducts Trimmed to meet DLR Requests
- 50 mm Dia Stainless Steel Tubes
- Includes Leybold Fittings
- Weight Status: 42.0 lbs  
Total Exhaust System

LCS in/outlet  
disconnect



# Baggage Compartment Modifications

- Lage der Unterflur-Leer-Rohre
- Durchmesser 2" (Alu)
- Druckdurchführung im
- Fußboden vor dem
- Mission-Pwr-Rack



# Aft Aperture

Hardpointlast über der  
Aperture = 100 kg

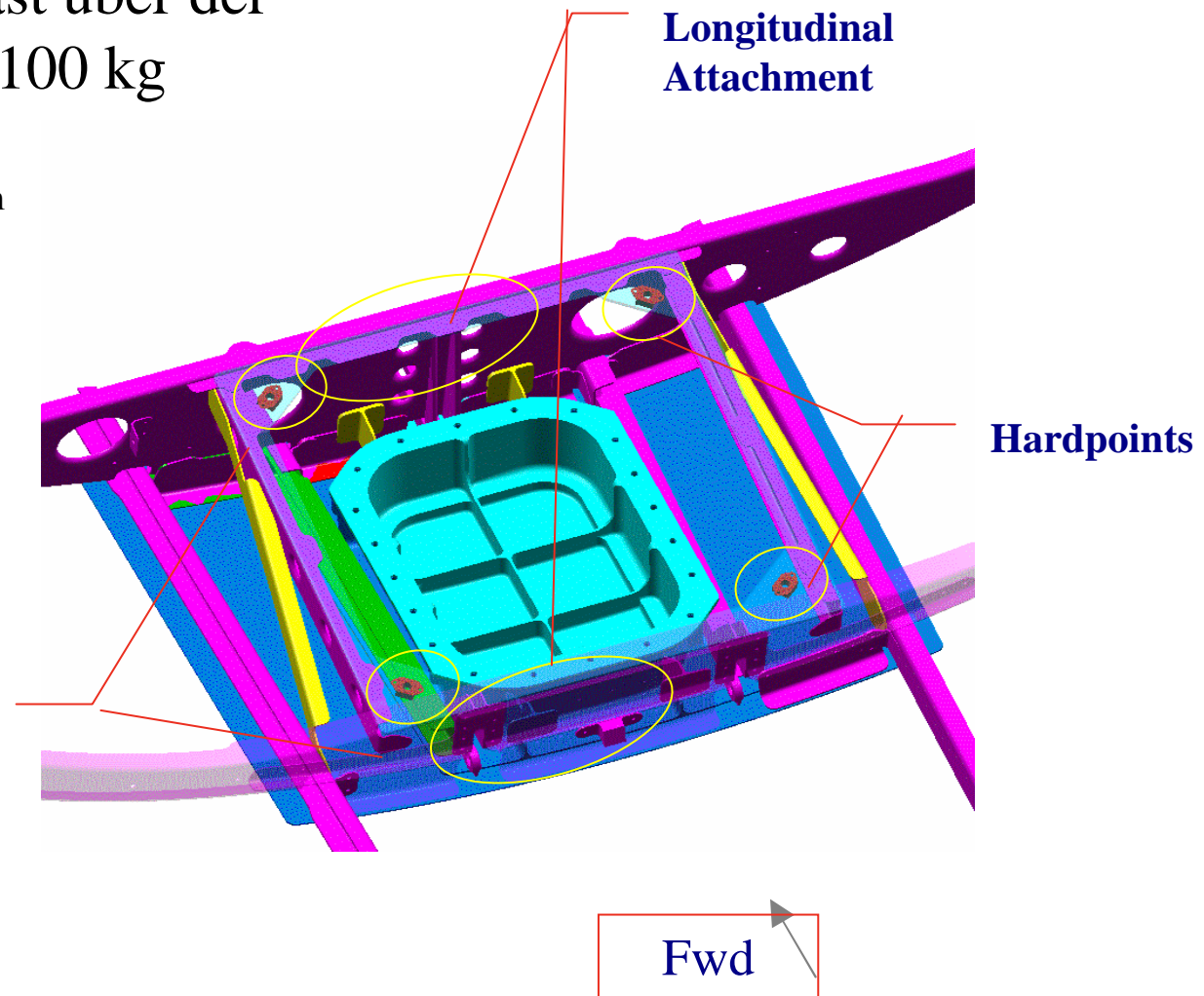
Grundfläche ca. 40x40 cm

H ca. 50 cm möglich

**GVFS 828.500**

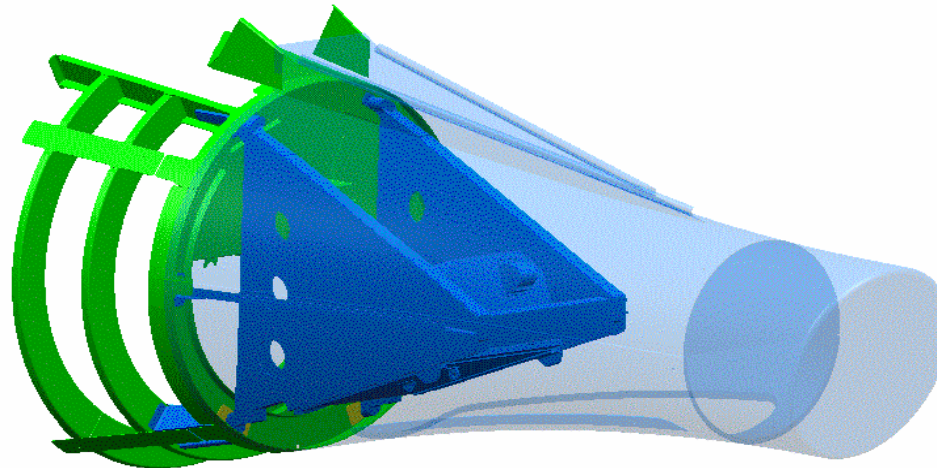
**Hardpoints**

**GVFS 844.250**



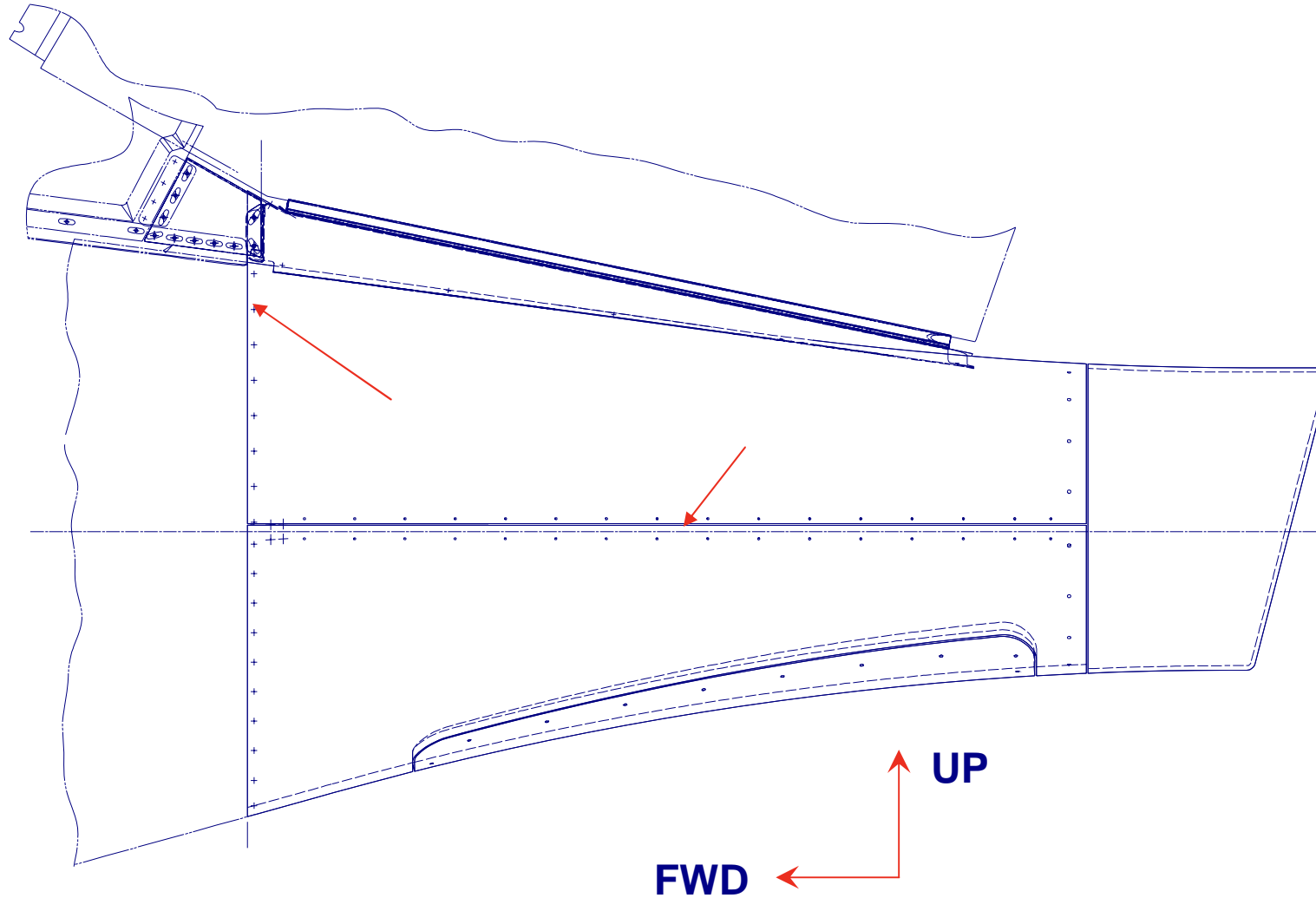
## Enlarged Tailcone Provisions

- Based on existing tailcone requirements. Hardpoint will support 95 Lbs. as loaded in an existing design



# Enlarged Tailcone Provisions

## Enlarged Cone is only optional, will not be delivered





**Noch Fragen??????**