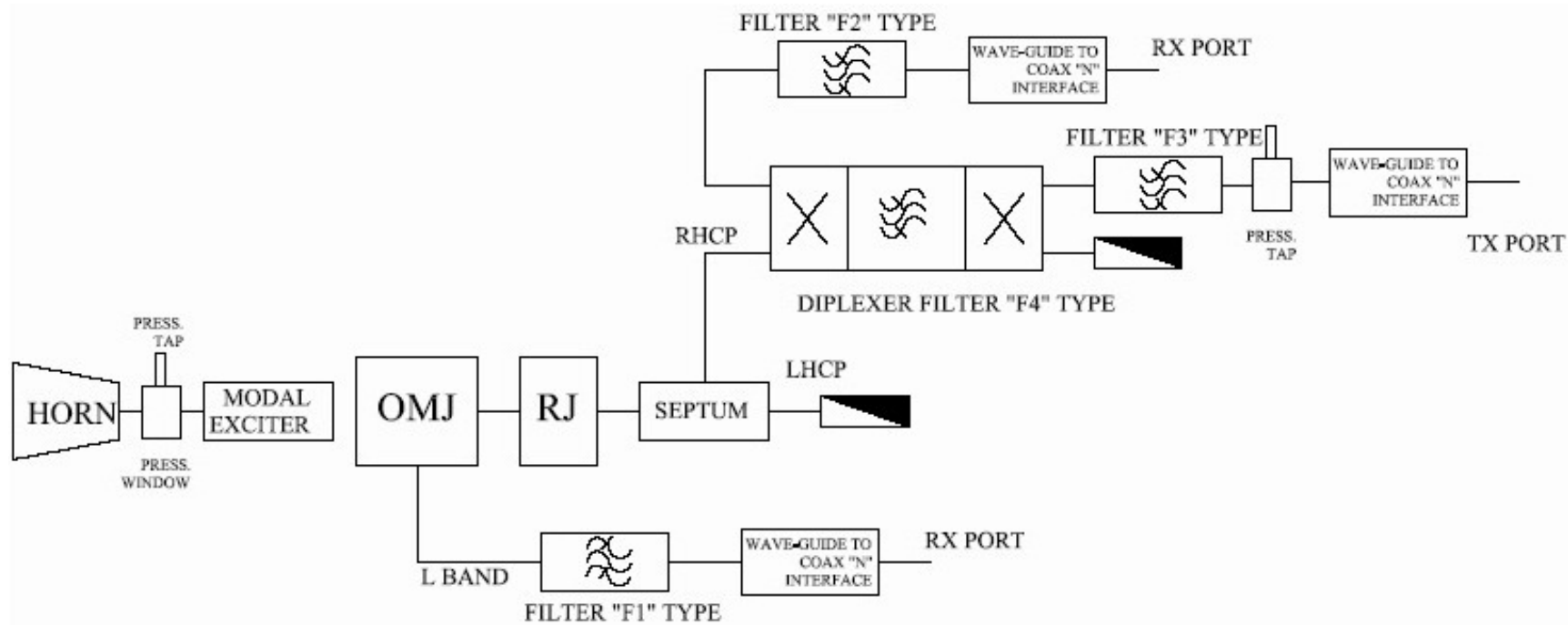
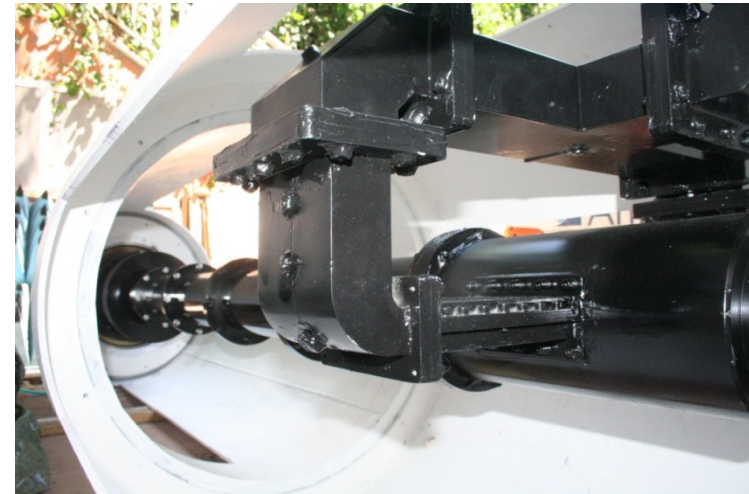
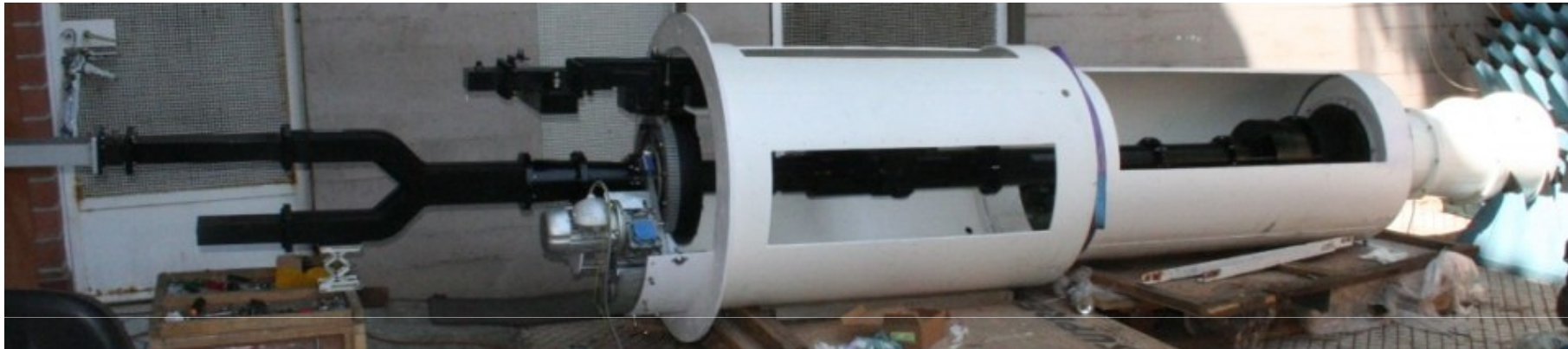


DESIGN EXAMPLE – L/S BAND FEED FOR 13 MT ANTENNA

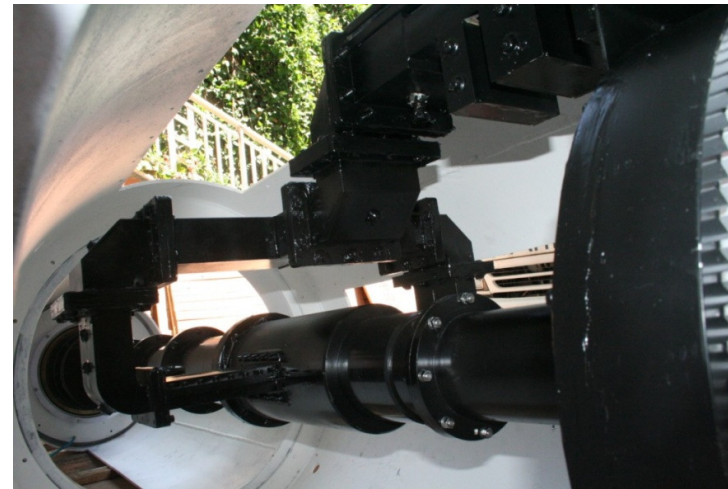
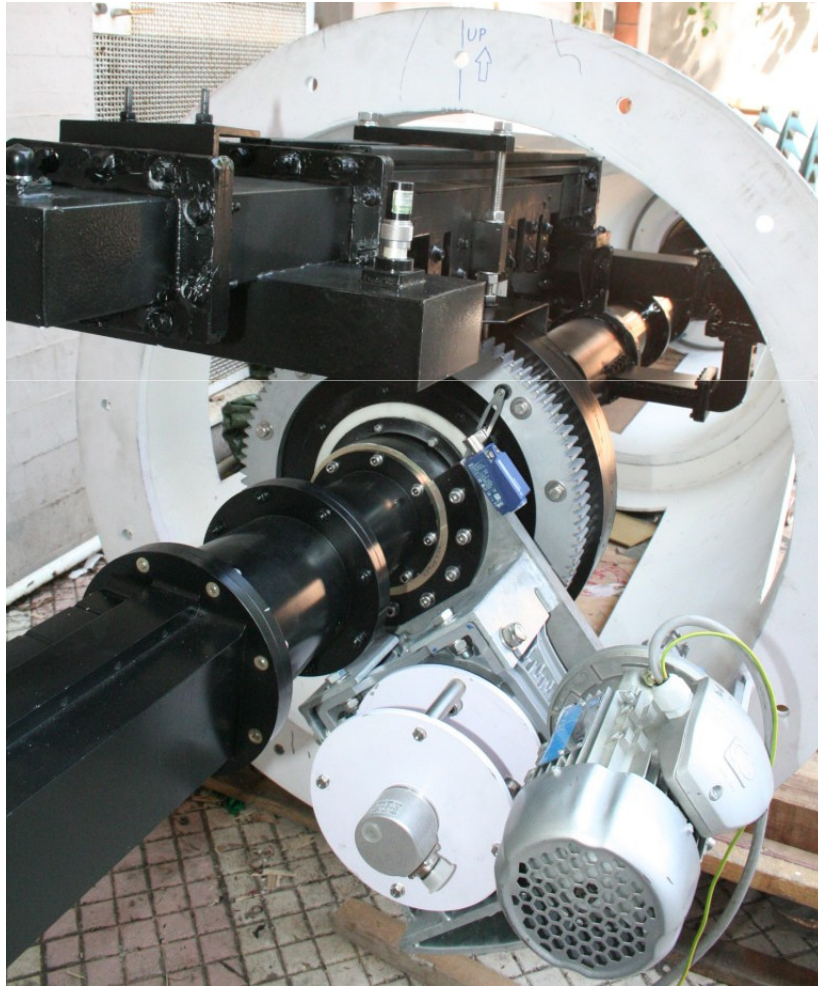


FILTER TYPE	PASS BAND [MHZ]	REJECT BAND [MHZ]
F1	1670 -1700	2025-2300
F2	2200-2300	2025-2120
F3	2025-2120	2200-2300
F4	2025-2120	2200-2300

DESIGN EXAMPLE – L/S BAND FEED FOR 13 MT ANTENNA



DESIGN EXAMPLE – L/S BAND FEED FOR 13 MT ANTENNA



DESIGN EXAMPLE – L/S BAND FEED FOR 13 MT ANTENNA

MEASUREMENT TYPE	EXPECTED VALUE	MEASURED VALUE
AXIAL RATIO RX S BAND	$\Delta \leq 1.0$ dB	≤ 0.85 dB
AXIAL RATIO TX S BAND	$\Delta \leq 1.0$ dB	≤ 0.85 dB
AXIAL RATIO RX L BAND	$\Delta \geq 28$ dB	≥ 40 dB
RX INSERTION LOSS S BAND	≥ 0.5 dB	0.5 dB
TX INSERTION LOSS S BAND	≤ 0.5 dB	0.5 dB
RX INSERTION LOSS L BAND	≤ 0.5 dB	0.5 dB
RX RETURN LOSS S BAND	≥ 17.7 dB	18.5 dB
TX RETURN LOSS S BAND	≥ 17.7 dB	18.5 dB
RX RETURN LOSS L BAND	≥ 17.7 dB	18.5 dB
ISOLATION LOSS PORT 1/2 (RX S BAND)	≥ 120 dB	≥ 135 dB
ISOLATION LOSS PORT 1/3 (RX S BAND)	≥ 50 dB	≥ 60 dB
ISOLATION LOSS PORT 1/2 (TX S BAND)	≥ 120 dB	≥ 123 dB
ISOLATION LOSS PORT 1/3 (TX S BAND)	≥ 115 dB	≥ 130 dB
ISOLATION LOSS PORT 1/2 (L BAND)	≥ 115 dB	≥ 140 dB
ISOLATION LOSS PORT 1/3 (L BAND)	≥ 100 dB	≥ 120 dB

DESIGN EXAMPLE – L/S BAND FEED FOR 13 MT ANTENNA

MEASUREMENT TYPE	EXPECTED VALUE	MEASURED VALUE
ISOLATION LOSS PORT 2/1 (RX S BAND)	≥ 120 dB	≥ 140 dB
ISOLATION LOSS PORT 2/3 (RX S BAND)	≥ 120 dB	≥ 140 dB
ISOLATION LOSS PORT 2/1 (TX S BAND)	≥ 120 dB	≥ 130 dB
ISOLATION LOSS PORT 2/3 (TX S BAND)	≥ 110 dB	≥ 140 dB
ISOLATION LOSS PORT 2/1 (L BAND)	≥ 115 dB	≥ 130 dB
ISOLATION LOSS PORT 2/3 (L BAND)	≥ 150 dB	≥ 150 dB
ISOLATION LOSS PORT 3/1 (RX S BAND)	≥ 50 dB	≥ 63 dB
ISOLATION LOSS PORT 3/1 (TX S BAND)	≥ 110 dB	≥ 140 dB
ISOLATION LOSS PORT 3/1 (L BAND)	≥ 100 dB	≥ 115 dB
PRESSURIZATION TEST	≥ 2 kPa	2.8 kPa
RX GROUP DELAY S BAND	≤ 2 ns ± 5 MHz	≤ 2 ns ± 5 MHz
TX GROUP DELAY S BAND	≤ 2 ns ± 5 MHz	≤ 2 ns ± 5 MHz
RX GROUP DELAY L BAND	≤ 2 ns ± 5 MHz	≤ 2 ns ± 5 MHz
RX FREQUENCY RESPONSE S BAND	≤ 0.2 dB over any 1 MHz	≤ 0.2 dB
TX FREQUENCY RESPONSE S BAND	≤ 0.2 dB over any 2 MHz	≤ 0.2 dB

DESIGN EXAMPLE – L/S BAND FEED FOR 13 MT ANTENNA

MEASUREMENT TYPE	EXPECTED VALUE	MEASURED VALUE
RX FREQUENCY RESPONSE L BAND	≤ 0.2 dB over any 6 MHz	≤ 0.2 dB
RF LEAKAGE S BAND		80 dB
INSERTION LOSS DIPLEXER RX S BAND	≤ 0.5 dB	0.3 dB
INSERTION LOSS DIPLEXER TX S BAND	≤ 0.5 dB	2 dB
