3VTV-02 (Horizontal polarization)
VHF PANEL ANTENNA

FEATURES

- horizontal polarization
- broadband 174 ÷ 230 MHz
- 8 dB gain
- directional pattern
- suitable as a component in various arrays
- suitable also for vertical polarization

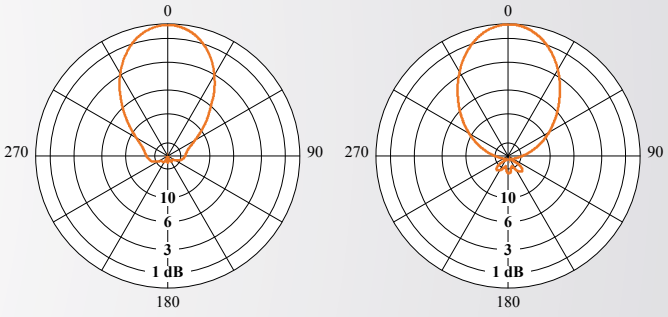
ELECTRICAL DATA

ANTENNA TYPE	3VTV-02	3VTV-02/E
FREQUENCY RANGE	174 ÷ 230 MHz	
IMPEDANCE	50 ohm	
CONNECTOR	7/8" EIA or 7/16 F	
MAX POWER	3 kW (7/8" EIA), 2.5 kW (7/16 F)	
VSWR	≤ 1.1	
POLARIZATION	Horizontal	
GAIN (referred to half wave dipole)	8 dB	
HALF POWER BEAMWIDTH	E-Plane ± 32° H-Plane ± 30°	
LIGHTNING PROTECTION	All Metal Parts DC Grounded	

MECHANICAL DATA

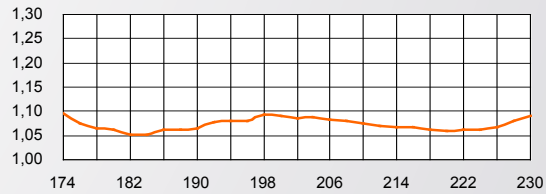
DIMENSIONS	1300x1300x535 mm	1300x1300x513 mm
WEIGHT	29 kg	27 kg
WIND SURFACE	0.76 m^2	0.67 m^2
WIND LOAD (at 150km/h)	0.83 kN	0.73 kN
MAX WIND VELOCITY	220 km/h	
MATERIALS	Reflector (hot dip galvanized steel) Dipole (stainless steel) Internal parts (silver plated brass, deoxidized aluminium) Radome (fiberglass)	
ICING PROTECTION	Feed point radome (only for 3VTV-02)	
RADOME COLOUR	Grey (standard)	
MOUNTING	Directly on supporting mast or tower	

RADIATION PATTERNS (Mid Band)



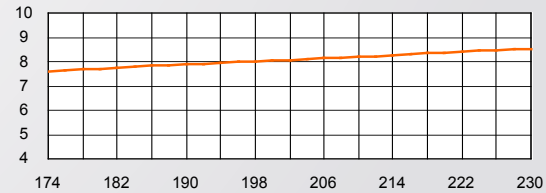
H-Plane E-Plane

VSWR



FREQ. (MHz)

GAIN (dB)



FREQ. (MHz)

3VTV-02 (Horizontal polarization)
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FEATURES

- radiating systems with 3VTV-02 panel
- high power antenna systems
- omnidirectional or directional patterns
- equal or unequal power split ratio distribution network

ELECTRICAL DATA

FREQUENCY RANGE	174 ÷ 230 MHz
IMPEDANCE	50 ohm
CONNECTOR	EIA flange according to system power rating
POWER RATING	The antenna system can accept any power according to requirements
VSWR	≤ 1.05 in the operating channels
POLARIZATION	Horizontal
GAIN	Refer to table
HORIZONTAL PATTERN	Any type according to requirement
VERTICAL PATTERN	Null fill,beam tilt and special requirements to order
OTHER FEATURES	The antenna system can be supplied in split feed configuration with two equal halves. Each half can accept full power

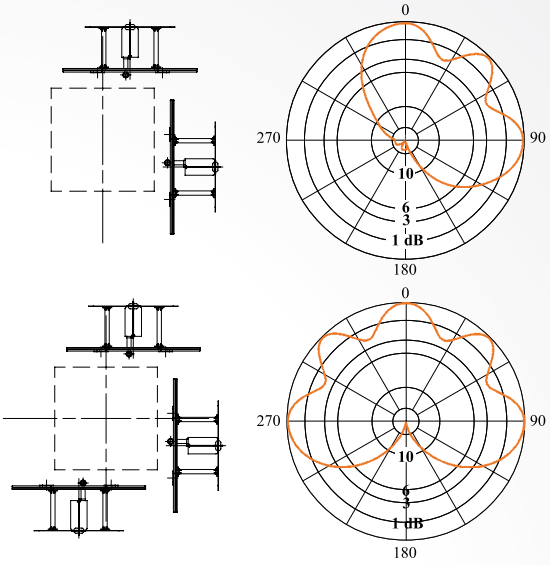
MECHANICAL DATA

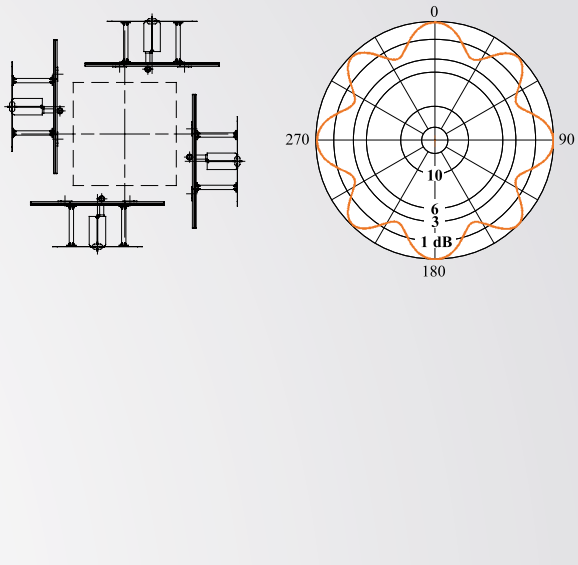
HEIGHT OF ARRAY	Subject to number of bays
TOTAL NET WEIGHT	Refer to table
WIND LOAD	Refer to table
PRESSURIZZABLE	Yes
RADOME COLOUR	Grey (standard)
MOUNTING HARDWARE	Available upon request

Specifications are subject to change without prior notice

3VTV-02 (Horizontal polarization)
VHF PANEL ANTENNA

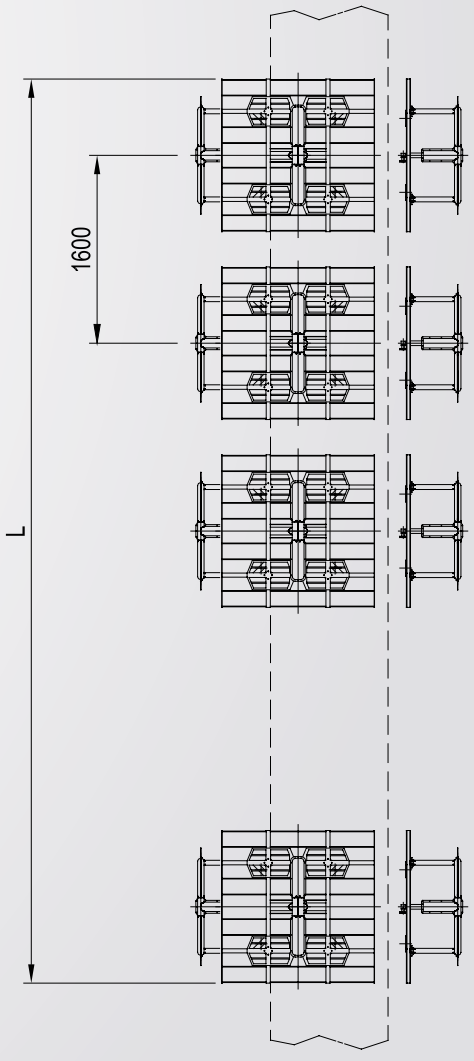
HORIZONTAL PATTERNS WITH OFFSET 2, 3 AND 4 FACES AT 200 MHz





TECHNICAL DATA

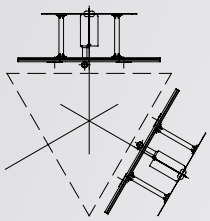
NUMBER OF BAYS	PANELS PER BAY	GAIN dB (1)	GAIN TIMES (1)	WEIGHT kg (2a)	WEIGHT kg (2b)	ANTENNA HEIGHT L m	WIND LOAD (3a) kN	WIND LOAD (3b) kN
2	1	11	12.6	70	66	2.9	1.66	1 34
	2	8	6.3	135	127		2.80	2.16
	3	6.2	4 2	200	188		3.65	2.70
	4	5	3.2	270	254		4.48	3.20
4	1	14	25.1	135	127	6.1	3.32	2.68
	2	11	12.6	270	254		5 56	4.28
	3	9.2	8 3	420	396		7.30	5.38
	4	8	6.3	610	578		8.97	6.42
6	1	15.9	38.9	200	188	9 3	4.98	4.02
	2	12.9	19 5	420	396		8.42	6.51
	3	11.1	12.8	690	654		10.95	8.07
	4	9.9	9.8	860	812		13.45	9.62
8	1	17	50.1	270	254	12.5	6.64	5.36
	2	14	25.1	610	578		11 24	8.68
	3	12.2	16.6	860	812		14.60	10.76
	4	11	12.6	1115	1051		17.95	12.83
12	1	18.9	77.6	420	396	18.9	9.96	8.04
	2	15.9	38.9	860	812		16.86	13.02
	3	14.1	25.7	1380	1308		21.86	16.12
	4	12.9	19.5	1720	1624		26.90	19 25
16	1	20	100	610	578	25.3	13.30	10.72
	2	17	50.1	1115	1051		22.48	17 37
	3	15.2	33.1	1720	1624		29 20	21 53
	4	14	25.1	2225	2097		35.90	25.68

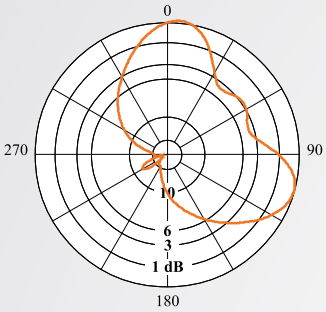


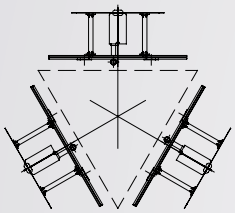
(1) referred to half wave dipole. Losses of power distribution network not included.
(2a) for 3vtv-02 and without mounting hardware. - (2b) for 3vtv-02/E and without mounting hardware.
(3a) for 3vtv-02 (v= 150 km/h) - (3b) for 3vtv-02/E (v= 150 km/h)

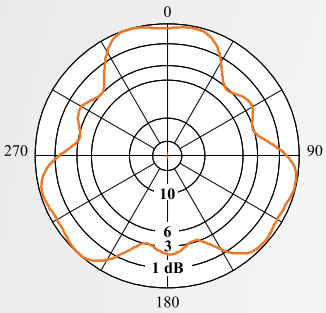
3VTV-02 (Horizontal polarization)
VHF PANEL ANTENNA

HORIZONTAL PATTERNS 2 AND 3 FACES AT 200 MHz





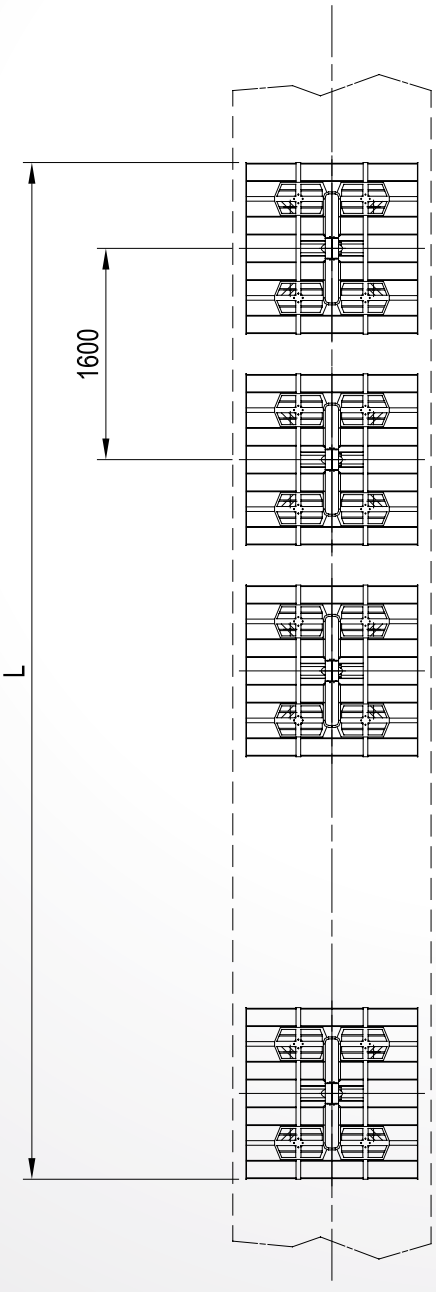




TECHNICAL DATA

NUMBER OF BAYS	PANELS PER BAY	GAIN dB (1)	GAIN TIMES (1)	WEIGHT kg (2a)	WEIGHT kg (2b)	ANTENNA HEIGHT L m	WIND LOAD (3a) kN	WIND LOAD (3b) kN
	1	10	10	70	66		1.59	1.40
2	2	7	5	135	127	2.9	2 38	2.09
	3	5.2	3.3	200	188		3 36	2.95
	1	13	20	135	127		3.18	2.80
4	2	10	10	270	254	6.1	4.76	4.18
	3	8.2	6.6	420	396		6.72	5.91
	1	14.9	30.9	200	188		4.77	4.20
6	2	11.9	15 5	420	396	9 3	7.14	6.28
	3	10.1	10.2	690	654		10.08	8.86
	1	16	40	270	254		6.36	5.60
8	2	13	20	610	578	12.5	9.52	8 37
	3	11 2	13 2	860	812		13.44	11.82
	1	17.9	61.6	420	396		9.55	8.40
12	2	14.9	30.9	860	812	18.9	14.28	12 56
	3	13.1	20.4	1380	1308		20.16	17.73
	1	19	80	610	578		12.73	11.20
16	2	16	40	1115	1051	25 3	19.04	16.75
	3	14 2	26 3	1720	1624		26.87	23.63

(1) referred to half wave dipole. Losses of power distribution network not included.
(2a) for 3vtv-02 and without mounting hardware. - (2b) for 3vtv-02/E and without mounting hardware.
(3a) for 3vtv-02 (v= 150 km/h) - (3b) for 3vtv-02/E (v= 150 km/h)



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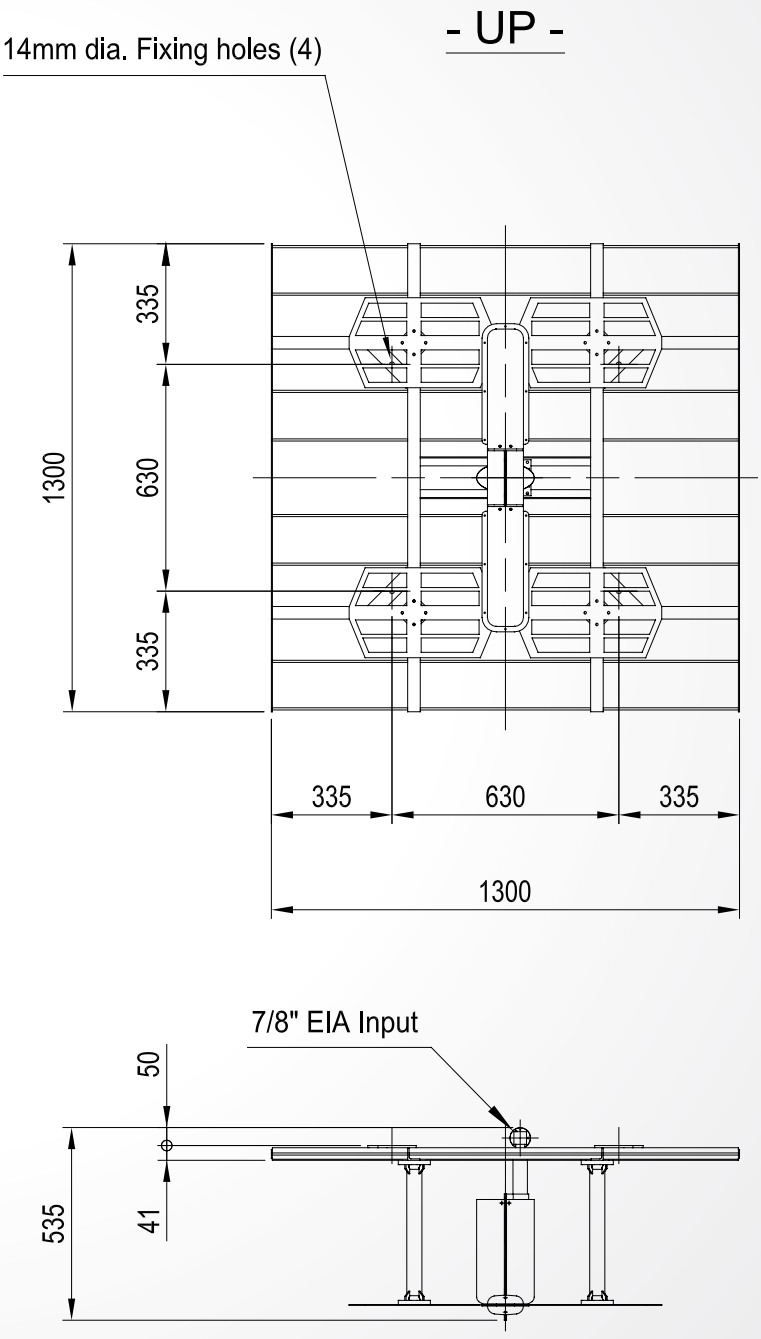
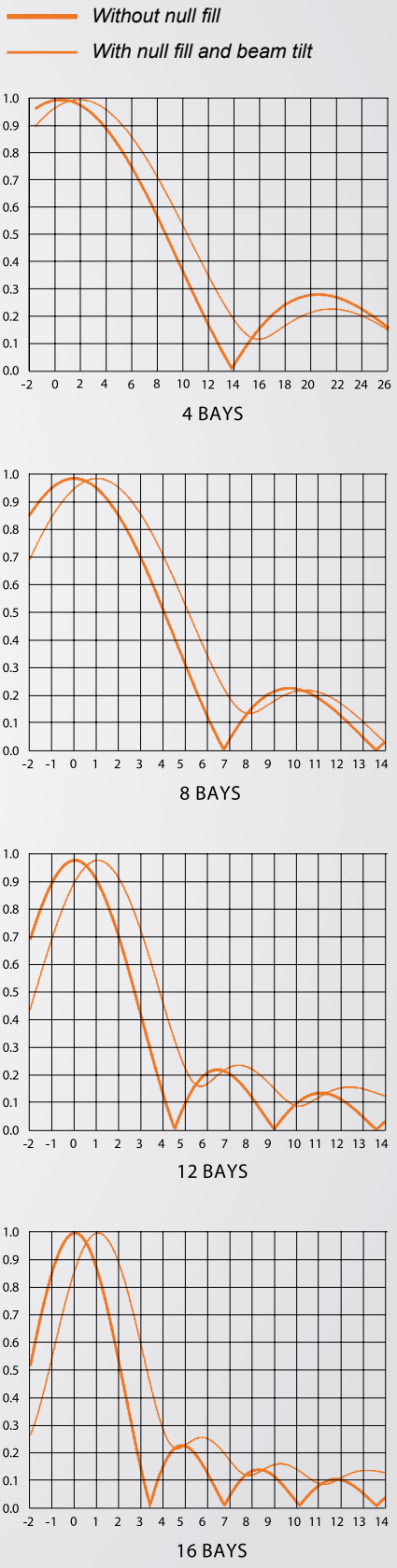
DIMENSIONAL DETAILS



VERTICAL PATTERN