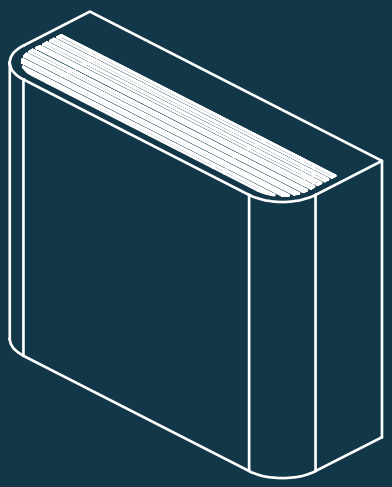
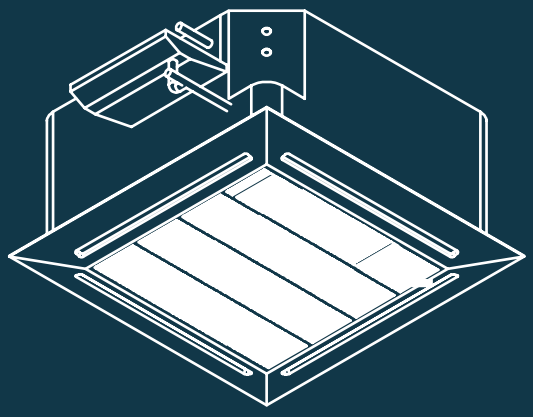
QUARTZ

FAN COILS AND HVAC

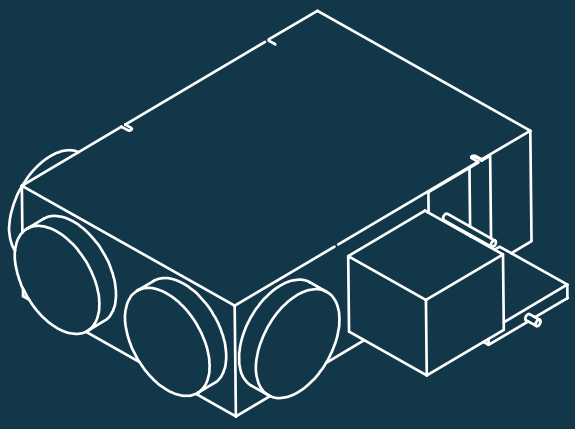






fan coils & hvac

Technical Brochure



QUARTZ 5 Year PARTS WARRANTY AS STANDARD

DESIGNED & MADE IN THE UK

In partnership with

MARSTAIR

REFRIGERATION AND SPECIALIST AIR CONDITIONING



Chassis

• Manufactured from galvanised sheet steel, riveted and spot welded for rigidity.



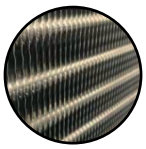
Casing

• The outer cabinet is a single piece, hot dipped galvanised sheet steel wrap around section
• PVC pre-coated to ensure high resistance to corrosion. The standard colour is RAL9010 White. Cabinets are fitted as standard with 100mm wide ABS moulded grilles in light grey (RAL7035).



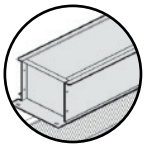
Fan / Motors

• Energy Efficient EC/DC motors in either single fan or motor / impeller configuration are used throughout the range.
• Topaz uses single inlet impellers.



Coils

• Coils are manufactured from seamless copper tube, mechanically expanded into aluminium fins having die formed collars to obtain maximum contact providing optimised heat transfer. Circuits are designed to ensure optimisation of output. Vents are fitted with easily accessible slotted/ hexagonal plugs. Testing shall be by dry air to 30 bar, and valve assemblies by hydraulic pressure to manufacturers maximum recommended operating pressure.



Spigots (Chassis units only)

• Standard chassis unit is open discharge, circular or rectangular optional extras spigot options available



Insulation

• Acoustic & thermal Class ‘O’ insulation



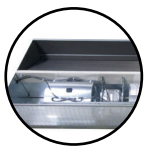
Condensate Tray

• Insulated internal condensate tray made of galvanised steel sheet, complete with drain plug for complete drainage. External drain tray is ABS plastic



Speed Control

• Speed control through optional extra DC Potentiometer or through BMS Controller (if controller has this function available). Both can be fitted in series.



Filters

• Filtering honeycomb polypropylene fabric enclosed within a metal frame to facilitate withdrawal and cleaning.
• Filtering rate of the standard model: EU1. Optional extra EU2 & EU3 filters available

Performance Output

Model	Speed	Airflow l/s	Cooling				Heating			Electrical (EC/DC)		Acoustic
			UK (23db/16.1wb)		Eurovent (27db/19wb)		UK (20db)	Eurovent (20˚C)				
			6/12		7/12		82/71	65/55 4 pipe	45/40 2 pipe			
			Sensible	Total	Sensible	Total	Total	Total	Total	FLC	Anticipated SFP	NR
			kW	kW	kW	kW	kW	kW	kW	Amps	w/l/s	See Qualification
TPZ Cased Units *All Data At 0Pa External Resistance*												
TPZ 10 Cased	Whisper	32	0.39	0.42	0.49	0.59	1.05	0.71	0.69	0.09	0.18	17
	Low	35	0.42	0.45	0.52	0.61	1.11	0.75	0.70	0.10	0.17	19
	Low-med	42	0.47	0.51	0.59	0.67	1.25	0.85	0.85	0.12	0.19	23
	Med	50	0.52	0.56	0.67	0.74	1.42	0.96	0.97	0.15	0.20	28
	Med-high	60	0.57	0.62	0.74	0.82	1.58	1.07	1.12	0.17	0.18	33
	High	72	0.63	0.68	0.83	0.91	1.78	1.20	1.29	0.18	0.16	36
TPZ 20 Cased	Whisper	49	0.62	0.68	0.77	0.94	1.73	1.21	1.15	0.11	0.21	19
	Low	55	0.67	0.73	0.84	0.99	1.87	1.30	1.25	0.12	0.20	23
	Low-med	64	0.74	0.81	0.94	1.08	2.07	1.44	1.41	0.14	0.20	27
	Med	76	0.82	0.89	1.06	1.20	2.33	1.61	1.61	0.16	0.20	31
	Med-high	92	0.93	1.00	1.20	1.34	2.65	1.83	1.91	0.19	0.20	36
	High	108	1.01	1.09	1.39	1.54	2.92	2.01	2.16	0.21	0.18	39
TPZ 30 Cased	Whisper	60	0.73	0.80	0.91	1.07	2.35	1.65	1.41	0.22	0.20	16
	Low	71	0.81	0.87	1.01	1.16	2.61	1.83	1.58	0.23	0.18	22
	Low-med	92	0.94	1.01	1.22	1.36	3.12	2.18	1.94	0.27	0.16	29
	Med	108	1.04	1.12	1.42	1.58	3.49	2.44	2.15	0.29	0.15	32
	Med-high	121	1.12	1.21	1.57	1.75	3.79	2.65	2.43	0.32	0.15	33
	High	140	1.20	1.30	1.77	1.97	4.15	2.90	2.70	0.38	0.15	37
TPZ 40 Cased	Whisper	59	0.75	0.83	0.94	1.13	2.31	1.61	1.57	0.22	0.20	16
	Low	69	0.82	0.89	1.03	1.20	2.51	1.76	1.80	0.23	0.19	20
	Low-med	90	0.97	1.04	1.27	1.45	3.00	2.09	2.19	0.27	0.17	28
	Med	104	1.06	1.14	1.46	1.66	3.32	2.30	2.44	0.29	0.15	31
	Med-high	119	1.14	1.23	1.66	1.88	3.64	2.53	2.77	0.32	0.15	34
	High	139	1.24	1.34	1.88	2.11	4.01	2.78	3.12	0.38	0.15	36
TPZ 50 Cased	Whisper	95	1.04	1.12	1.38	1.59	3.35	2.35	2.13	0.27	0.16	23
	Low	110	1.14	1.22	1.58	1.81	3.69	2.59	2.44	0.31	0.15	26
	Low-med	130	1.26	1.35	1.82	2.07	4.14	2.90	2.72	0.36	0.15	31
	Med	151	1.37	1.48	2.08	2.34	4.61	3.23	3.05	0.50	0.18	35
	Med-high	179	1.52	1.65	2.38	2.65	5.14	3.59	3.50	0.59	0.18	40
	High	213	1.82	1.97	2.72	3.02	5.72	4.00	3.95	0.76	0.20	44
TPZ 60 Cased	Whisper	97	1.22	1.34	1.68	2.18	3.72	2.61	2.33	0.41	0.15	21
	Low	113	1.34	1.46	1.91	2.44	4.12	2.88	2.61	0.49	0.16	27
	Low-med	131	1.48	1.60	2.17	2.73	4.56	3.19	2.97	0.54	0.15	30
	Med	152	1.73	1.88	2.47	3.06	5.08	3.56	3.31	0.76	0.18	35
	Med-high	180	2.04	2.21	2.84	3.43	5.65	3.95	3.76	0.92	0.19	40
	High	213	2.36	2.56	3.24	3.83	6.28	4.39	4.29	1.13	0.20	43
TPZ 70 Cased	Whisper	94	1.53	1.94	1.97	2.92	4.31	3.03	2.31	0.25	0.15	19
	Low	109	1.68	2.06	2.18	3.14	4.43	3.11	2.68	0.31	0.16	22
	Low-med	128	1.86	2.17	2.40	3.32	4.57	3.21	3.17	0.34	0.15	27
	Med	152	2.16	2.49	2.77	3.75	5.11	3.59	3.64	0.50	0.18	32
	Med-high	186	2.57	2.92	3.27	4.31	5.83	4.09	4.30	0.63	0.19	38
	High	228	3.06	3.43	3.89	5.00	6.70	4.70	5.04	0.79	0.19	43
TPZ 80 Cased	Whisper	208	2.26	2.44	3.14	3.69	6.45	4.51	3.08	0.39	0.17	35
	Low	249	2.52	2.71	3.69	4.28	7.28	5.09	4.18	0.60	0.22	40
	Low-med	278	2.70	2.91	4.06	4.68	7.87	5.50	5.04	0.84	0.28	43
	Med	315	2.90	3.13	4.52	5.18	8.55	5.98	5.38	1.10	0.32	46
	Med-high	347	3.13	3.38	4.87	5.54	9.06	6.32	5.90	1.21	0.32	48
	High	397	3.62	3.91	5.42	6.10	9.84	6.87	5.85	1.61	0.37	52
TPZ 90 Cased	Whisper	203	2.60	2.60	3.73	4.27	7.06	4.94	3.18	0.48	0.22	38
	Low	242	2.89	2.89	4.35	4.91	7.95	5.55	4.39	0.65	0.25	42
	Low-med	266	3.05	3.05	4.73	5.29	8.50	5.93	5.21	0.83	0.29	44
	Med	297	3.32	3.32	5.21	5.77	9.18	6.41	5.75	0.95	0.30	46
	Med-high	327	3.71	3.71	5.64	6.16	9.74	6.80	5.88	1.09	0.31	49
	High	371	4.22	4.22	6.23	6.71	10.53	7.35	6.23	1.20	0.30	52
TPZ 100 Cased	Whisper	230	2.71	2.94	3.93	5.06	8.55	6.00	6.24	0.55	0.22	38
	Low	256	2.89	3.14	4.31	5.48	9.20	6.45	6.80	0.68	0.25	40
	Low-med	288	3.26	3.53	4.78	6.00	9.99	7.01	7.49	0.84	0.27	42
	Med	322	3.69	4.00	5.26	6.53	10.82	7.58	7.87	1.08	0.32	45
	Med-high	357	4.10	4.44	5.73	7.02	11.60	8.12	8.36	1.23	0.32	48
	High	397	4.51	4.89	6.24	7.51	12.38	8.67	8.89	1.43	0.34	50

Performance Output

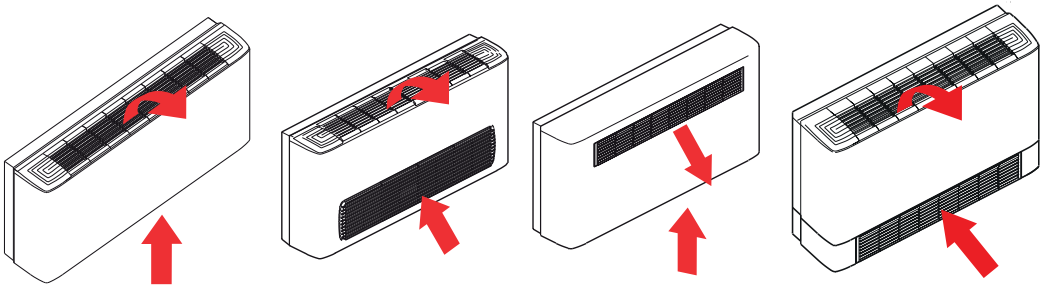
Model	Speed	Airflow l/s	Cooling				Heating			Electrical (EC/DC)		Acoustic
			UK (23db/16.1wb)		Eurovent (27db/19wb)		UK (20db)	Eurovent (20˚C)				
			6/12		7/12		82/71	65/55 4 pipe	45/40 2 pipe			
			Sensible	Total	Sensible	Total	Total	Total	Total	FLC	Anticipated SFP	NR
			kW	kW	kW	kW	kW	kW	kW	Amps	w/l/s	See Qualification
TPZ 110 Cased	Whisper	233	2.88	3.15	3.91	4.95	7.92	5.55	5.68	0.40	0.16	34
	Low	261	3.10	3.36	4.32	5.43	8.53	5.96	6.46	0.59	0.21	37
	Low-med	361	3.80	4.09	5.76	7.02	10.60	7.41	7.73	1.07	0.28	41
	Med	416	4.34	4.67	6.53	7.84	11.73	8.18	8.50	1.51	0.34	44
	High	530	5.59	6.02	7.92	9.25	13.60	9.48	10.69	2.06	0.36	51
TPZ 120 Cased	Whisper	242	2.97	3.24	4.16	5.38	9.54	6.68	6.13	0.65	0.25	34
	Low	278	3.24	3.52	4.71	6.03	10.47	7.33	6.57	0.84	0.28	37
	Low-med	377	3.90	4.19	6.17	7.67	12.93	9.04	7.70	1.43	0.36	43
	Med	419	4.42	4.77	6.78	8.35	13.96	9.76	9.20	1.65	0.37	45
	High	528	5.71	6.16	8.17	9.74	16.13	11.27	11.10	2.13	0.38	52
TPZ Chassis Units *All Data At 5Pa External Resistance*												
TPZ 10 Chassis	Whisper	24	0.33	0.37	0.41	0.51	0.89	0.60	0.54	0.09	0.19	17
	Low	28	0.36	0.40	0.45	0.55	0.96	0.64	0.55	0.10	0.18	19
	Low-med	36	0.42	0.46	0.53	0.62	1.12	0.76	0.72	0.12	0.20	23
	Med	44	0.48	0.52	0.62	0.70	1.30	0.88	0.92	0.15	0.21	28
	Med-high	55	0.55	0.59	0.71	0.79	1.50	1.02	1.07	0.17	0.19	33
	High	68	0.62	0.66	0.80	0.88	1.71	1.15	1.25	0.18	0.17	36
TPZ 20 Chassis	Whisper	39	0.55	0.63	0.67	0.87	1.58	1.10	0.93	0.11	0.22	19
	Low	47	0.61	0.67	0.75	0.91	1.68	1.16	1.06	0.12	0.21	23
	Low-med	57	0.69	0.75	0.86	1.02	1.92	1.33	1.25	0.14	0.21	27
	Med	71	0.79	0.86	1.00	1.14	2.21	1.53	1.48	0.16	0.21	31
	Med-high	87	0.90	0.96	1.16	1.29	2.56	1.77	1.79	0.19	0.21	36
	High	104	0.99	1.07	1.34	1.49	2.86	1.96	2.06	0.21	0.19	39
TPZ 30 Chassis	Whisper	61	0.73	0.80	0.91	1.07	2.37	1.65	1.00	0.22	0.20	22
	Low	78	0.85	0.92	1.08	1.22	2.78	1.95	1.29	0.23	0.18	29
	Low-med	96	0.96	1.04	1.27	1.41	3.20	2.24	1.73	0.27	0.16	32
	Med	112	1.07	1.15	1.47	1.63	3.59	2.51	1.94	0.29	0.15	33
	High	132	1.17	1.26	1.70	1.89	4.00	2.80	2.53	0.38	0.15	37
TPZ 40 Chassis	Whisper	40	0.61	0.74	0.75	1.04	2.09	1.46	1.09	0.22	0.20	16
	Low	54	0.72	0.81	0.89	1.12	2.28	1.59	1.43	0.23	0.19	20
	Low-med	77	0.88	0.95	1.11	1.27	2.70	1.89	1.91	0.27	0.17	28
	Med	94	0.99	1.07	1.33	1.51	3.09	2.15	2.20	0.29	0.15	31
	Med-high	111	1.09	1.18	1.55	1.76	3.46	2.41	2.54	0.32	0.15	34
	High	131	1.21	1.30	1.79	2.02	3.86	2.69	2.93	0.38	0.15	36
TPZ 50 Chassis	Whisper	84	0.96	1.04	1.23	1.43	3.07	2.16	1.82	0.27	0.16	23
	Low	100	1.07	1.15	1.45	1.66	3.45	2.42	2.15	0.31	0.15	26
	Low-med	121	1.21	1.30	1.71	1.95	3.94	2.76	2.46	0.36	0.15	31
	Med	144	1.33	1.44	1.99	2.25	4.44	3.12	2.82	0.50	0.18	35
	Med-high	173	1.48	1.60	2.32	2.59	5.03	3.52	3.31	0.59	0.18	40
	High	208	1.77	1.92	2.67	2.96	5.64	3.94	3.82	0.76	0.20	44
TPZ 60 Chassis	Whisper	79	1.06	1.18	1.39	1.85	3.23	2.27	1.97	0.41	0.15	21
	Low	99	1.23	1.34	1.70	2.20	3.75	2.63	2.28	0.49	0.16	27
	Low-med	120	1.39	1.51	2.01	2.55	4.28	3.00	2.68	0.54	0.15	30
	Med	142	1.61	1.75	2.33	2.90	4.83	3.39	3.05	0.76	0.18	35
	Med-high	174	1.97	2.13	2.75	3.34	5.53	3.87	3.55	0.92	0.19	40
	High	207	2.30	2.49	3.17	3.75	6.17	4.32	4.13	1.13	0.20	43
TPZ 70 Chassis	Whisper	79	1.34	1.76	1.73	2.62	4.09	2.89	1.80	0.25	0.15	19
	Low	96	1.55	1.97	2.00	2.96	4.33	3.05	2.17	0.31	0.16	22
	Low-med	119	1.77	2.11	2.29	3.23	4.46	3.13	2.78	0.34	0.15	27
	Med	145	2.06	2.39	2.65	3.62	4.94	3.47	3.37	0.50	0.18	32
	Med-high	189	2.61	2.96	3.32	4.37	5.89	4.13	4.08	0.63	0.19	38
	High	223	3.00	3.37	3.81	4.91	6.59	4.62	4.85	0.79	0.19	43
TPZ 80 Chassis	Whisper	200	2.21	2.39	3.04	3.58	6.29	4.40	2.81	0.39	0.17	35
	Low	244	2.49	2.68	3.62	4.21	7.19	5.02	3.98	0.60	0.22	40
	Low-med	273	2.67	2.87	3.99	4.60	7.76	5.42	4.83	0.84	0.28	43
	Med	311	2.88	3.10	4.47	5.13	8.49	5.92	5.19	1.10	0.32	46
	Med-high	343	3.09	3.34	4.83	5.50	9.00	6.29	5.70	1.21	0.32	48
	High	395	3.59	3.88	5.39	6.07	9.81	6.84	5.64	1.61	0.37	52

Performance Output

Model	Speed	Airflow l/s	Cooling				Heating			Electrical (EC/DC)		Acoustic
			UK (23db/16.1wb)		Eurovent (27db/19wb)		UK (20db)	Eurovent (20˚C)				
			6/12		7/12		82/71	65/55 4 pipe	45/40 2 pipe			
			Sensible	Total	Sensible	Total	Total	Total	Total	FLC	Anticipated SFP	NR
			kW	kW	kW	kW	kW	kW	kW	Amps	w/l/s	See Qualification
TPZ 90 Chassis	Whisper	185	2.46	2.46	3.43	3.96	6.64	4.65	2.91	0.48	0.22	38
	Low	232	2.82	2.82	4.19	4.75	7.73	5.40	4.17	0.65	0.25	42
	Low-med	258	3.01	3.01	4.60	5.17	8.31	5.81	4.99	0.83	0.29	44
	Med	289	3.21	3.21	5.09	5.65	9.01	6.29	5.53	0.95	0.30	46
	Med-high	319	3.61	3.61	5.52	6.05	9.59	6.70	5.66	1.09	0.31	49
	High	366	4.16	4.16	6.17	6.65	10.45	7.28	6.00	1.20	0.30	52
TPZ 100 Chassis	Whisper	219	2.63	2.86	3.77	4.88	8.27	5.80	5.96	0.55	0.22	38
	Low	250	2.85	3.09	4.22	5.38	9.06	6.35	6.55	0.68	0.25	40
	Low-med	283	3.19	3.45	4.70	5.92	9.87	6.92	7.29	0.84	0.27	42
	Med	317	3.62	3.93	5.18	6.44	10.68	7.49	7.66	1.08	0.32	45
	Med-high	359	4.12	4.47	5.75	7.05	11.63	8.14	8.18	1.23	0.32	48
	High	391	4.45	4.83	6.16	7.43	12.27	8.59	8.71	1.43	0.34	50
TPZ 110 Chassis	Whisper	221	2.78	3.05	3.72	4.73	7.65	5.35	5.39	0.40	0.16	34
	Low	248	2.99	3.26	4.12	5.20	8.24	5.76	6.00	0.59	0.21	37
	Low-med	360	3.78	4.08	5.74	7.00	10.57	7.39	7.58	1.07	0.28	41
	Med	413	4.29	4.62	6.49	7.80	11.66	8.14	9.00	1.51	0.34	44
	High	511	5.40	5.82	7.70	9.03	13.29	9.28	10.53	2.06	0.36	51
TPZ 120 Chassis	Whisper	232	2.89	3.17	4.00	5.20	9.28	6.51	5.77	0.65	0.25	34
	Low	269	3.18	3.45	4.58	5.87	10.24	7.17	6.31	0.84	0.28	37
	Low-med	373	3.87	4.17	6.11	7.60	12.83	8.97	7.55	1.43	0.36	43
	Med	408	4.26	4.59	6.62	8.17	13.69	9.57	9.20	1.65	0.37	45
	High	499	5.39	5.82	7.81	9.37	15.57	10.88	10.93	2.13	0.38	52

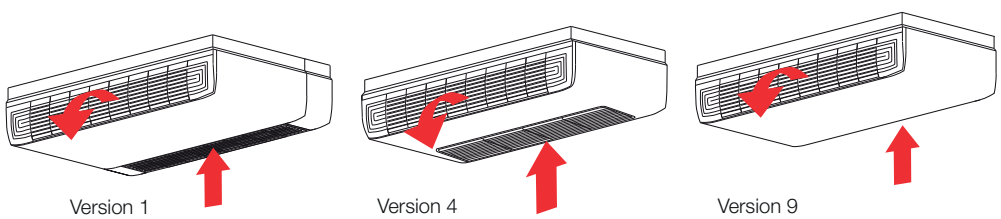
Configuration Options

Vertical Cased Units



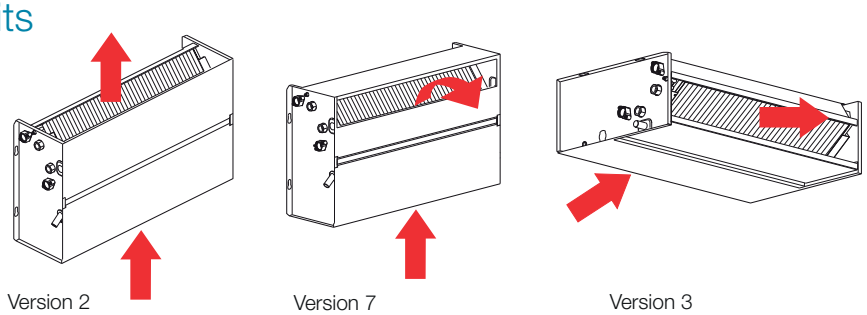
Version 0 Version 5 Version 6 Version 8

Horizontal Cased Units



Version 1 Version 4 Version 9

Chassis Units



Version 2 Version 7 Version 3

Detail of Product Code Configuration.

RANGE	MODEL SIZE	VERSION	AIR PATH/MOUNTING POSITION
TPZ	1	0	Cased Vertical Unit - Vertical Air intake & Vertical Discharge
	2	1	Cased Horizonal Unit - Vertical Air intake & Horizontal Discharge
	3	2	Chassis Vertical Unit - Vertical air Intake & Discharge
	4	3	Chassis Horizontal Unit - Horizontal air Intake & Discharge
	5	4	Cased Horizontal Unit - Vertical Air intake & Horizontal Discharge
	6	5	Cased Vertical Unit - Front air Intake & Top Discharge
	7	6	Cased Vertical High wall Unit - Vertical Air Intake & Front Discharge
	8	7	Chassis Vertical Unit - Vertical air Intake & Front Discharge
	9	7 Special Cased	Cased Vertical High wall Unit - Vertical air Intake & Front Discharge
	10	8	Cased Vertical Unit floor standing plinth - Front air intake & Top Discharge
	11	9	Cased Horizontal Unit - Horizontal air Intake & Discharge
	12		

Unit Dimensions

Unit Model	Unit Size											
	10	20	30	40	50	60	70	80	90	100	110	120
Cased Versions 0 & 9												
LENGTH	660	860	1060	1060	1260	1260	1260	1460	1460	1660	1960	1960
HEIGHT	480	480	480	480	480	480	585	585	585	602	602	602
DEPTH	225	225	225	225	225	225	225	225	225	257	257	257
Cased Versions 1 & 8												
LENGTH	660	860	1060	1060	1260	1260	1260	1460	1460	1660	1960	1960
HEIGHT	610	610	610	610	610	610	715	715	715	735	735	735
DEPTH	225	225	225	225	225	225	225	225	225	257	257	257
Cased Versions 4 & 5												
LENGTH	660	860	1060	1060	1260	1260	1260	1460	1460	1660	1960	1960
HEIGHT	480	480	480	480	480	480	585	585	585	602	602	602
DEPTH	225	225	225	225	225	225	225	225	225	257	257	257
Cased Version 6												
LENGTH	659	859	1059	1059	1259	1259	1259	1459	1459	-	-	-
HEIGHT	476	476	476	476	476	476	581	581	581	-	-	-
DEPTH	227	227	227	227	227	227	227	227	227	-	-	-
Special Hygene Cased - Version 7												
LENGTH	-	-	1110	1110	1310	1310	1310	1510	1510	1710	2010	2010
HEIGHT	-	-	580	580	580	580	685	685	685	702	702	702
DEPTH	-	-	245	245	245	245	245	245	245	277	277	277
Chassis Versions 2 & 7 (Vertical)												
LENGTH L	420	620	820	820	1020	1020	1020	1220	1220	1380	1680	1680
LENGTH A	102	102	102	102	102	102	102	102	102	130	130	130
LENGTH B	100	100	100	100	100	100	100	100	100	100	100	100
LENGTH + A + B + L	622	822	1022	1022	1222	1222	1222	1422	1422	1610	1910	1910
HEIGHT	460	460	460	460	460	460	565	565	565	585	585	585
DEPTH	220	220	220	220	220	220	220	220	220	252	252	252
Chassis Version 3 (Horizontal)												
LENGTH L	420	620	820	820	1020	1020	1020	1220	1220	1380	1680	1680
LENGTH A	130	130	130	130	130	130	160	160	160	160	160	160
LENGTH B	100	100	100	100	100	100	100	100	100	100	100	100
LENGTH + A + B + L	650	850	1050	1050	1250	1250	1280	1480	1480	1640	1940	1940
HEIGHT	460	460	460	460	460	460	565	565	565	585	585	585
DEPTH	220	220	220	220	220	220	220	220	220	252	252	252

* All dimensions quoted in mm

Qualification of NR predictions TPZ Chassis (Versions 2, 3 & 7)

The dB(A) figures quoted are intended as a guide to the levels expected in a typical office environment, based on a cooling load of 120 W/m^2, with a chilled water flow of 6°C, return of 12°C, return air temperature of 23°C and 50% R.H. Measurement points should be as follows:

• On Topaz Chassis units we have assumed the following sound reductions due to architectural case/wall construction

Hz	125	250	500	1k	2k	4k
	4	7	9	11	14	16