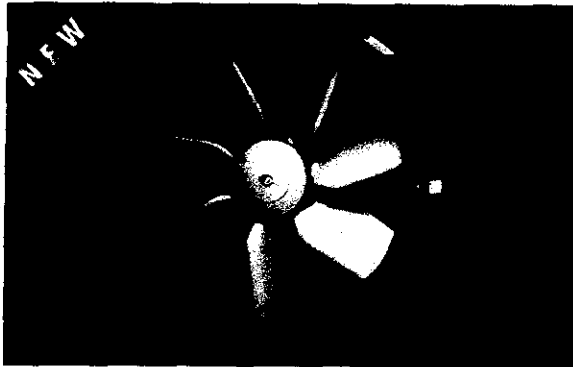


VENT-AXIA TURBOPROP - HIGH PRESSURE AXIAL FANS (TP)



TURBOPROP

More efficient kitchen filtration systems and ever larger duct runs have created a need for a new generation of competitively priced high pressure axial fans, suitable for higher working temperatures.

The range offers a new alternative to the H & V industry.

The all-new Vent-Axia TurboProp is a revolutionary design contra rotating case axial. Equivalent in length and up to 2 times the pressure characteristics of traditional long case axial fans.

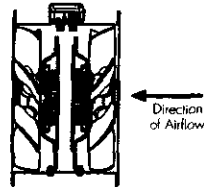
Available in four sizes: 450, 500, 560 and 630mm diameter with a performance from 0.688m³/s to 4.346m³/s (2,476m³/h to 15,645m³/h) and pressure development up to 800Pa.

Ensuring a compact design, the units have been constructed from a single sheet of steel, with both motors and axial impellers mounted within the length of the unit casing. The motor mounting supports are manufactured from steel rod, electro welded and epoxy paint finished, factory assembled to BS EN ISO 9001 ensuring a quiet and vibration free unit.

All sizes are protected with a tough black epoxy paint finish for those harsh environmental conditions, internally or externally. Ensuring ease of installation both motors are wired directly into a single IP65 terminal box.

IMPELLERS

The contra rotating impellers are manufactured in die-cast aluminium and are fitted with narrow profiled blades, which provide the maximum efficiency at the maximum airflow.



AXIAL MOTORS

Specifically designed and styled for this range of fans. Ball bearings are greased for life and allow the fans to be installed at any angle. Rotors are dynamically balanced to ISO 1940. Motors are protected to IP65 against dust and water jets complying with BS EN 60529. They have ribbed aluminium body castings for efficient cooling. Motor insulation is Class 'F' (from -40°C to +70°C).

Sizes 450 and 500 are suitable for speed control by either electronic or voltage reduction controllers. All 3-Phase models are suitable for speed control by frequency inverter.

ELECTRICAL

Single phase 220-240V/50 Hz. Capacitor start and run. Three phase 380V-415V/50Hz. All motors are fitted

- ✓ Contra Rotating, die cast aluminium impellers.
- ✓ Compact in size, equivalent to standard long case axial fans.
- ✓ Available from 450 to 630 diameter, 1 or 3 phase.
- ✓ Speed controllable.
- ✓ All units fully protected to IP65, ideally suited for internal or external installations.
- ✓ Motor insulation Class F, suitable for operating temperatures from -40°C to +70°C.
- ✓ Motors protected with Standard Thermal Overload Protection.
- ✓ Manufacture controlled to BS EN ISO 9001.
- ✓ Performance tested to BS 848 Parts 1 & 2.

with Standard Thermal Overload Protection (S.T.O.P.), which should be wired into all controller circuits and into starter contactors

TERMINAL BOX

IP65 terminal box is supplied with all models with 20mm and PGH entry.

PERFORMANCE

The fan performance is in accordance with tests to BS 848 Part 1 1980.

SOUND LEVELS

Fan sound levels, measured in a reverberant chamber in accordance with BS848 Part 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻¹²Pa (20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10⁻¹² Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

ACCESSORIES

- Electronic Speed Controllers
- Auto Transformer Speed Controllers
- Inverter Speed Controllers
- Ancillary Packs
- Case Attenuators
- Mounting Feet
- Wire Inlet Guard
- Coupling Flanges

Vent-Axia

TURBOPROP FANS PERFORMANCE GUIDE

1 PHASE, 4 POLE

Unit Code	Norm. RPM	Phase	0	50	100	150	200	300	400	500	600	700	800	Motor kW	SC Amps	FLC Amps
TP450-14	1370	1	1.859	1.800	1.741	1.673	1.605	1.431	1.197					1.24	21.60	5.40
TP500-14	1160	1	2.300	2.200	2.100	1.980	1.870	1.390	0.700					1.40	28.00	7.30
TP560-14	1340	1	3.852	3.765	3.668	3.571	3.454	3.193	2.892	2.562				3.25	56.00	15.50
TP630-14	1280	1	4.749	4.629	4.498	4.356	4.192	3.799	3.297	2.664	1.790			3.90	76.00	19.00

3 PHASE, 4 POLE

TP450-34	1400	3	1.841	1.794	1.739	1.688	1.628	1.475	1.202					1.25	20.40	3.40
TP500-34	1340	3	2.500	2.460	2.387	2.314	2.235	2.046	1.809					1.75	21.60	3.60
TP560-34	1360	3	3.808	3.735	3.638	3.541	3.444	3.202	2.943	2.668				3.12	34.80	5.80
TP630-34	1370	3	4.897	4.800	4.702	4.580	4.483	4.239	3.971	3.679	3.333	2.339	1.666	4.20	48.00	8.00

S.C. = STARTING CURRENT
F.L.C. = FULL LOAD CURRENT

SOUND DATA

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Code		63	125	250	500	1k	2k	4k	8k	dB(A) 3m
TP450	Inlet	72	89	93	84	83	77	70	64	68
	Outlet	79	89	93	87	86	80	73	67	70
TP500	Inlet	78	92	93	88	88	79	72	66	71
	Outlet	88	91	95	90	88	82	75	70	72
TP560	Inlet	83	95	92	89	89	83	77	73	72
	Outlet	96	98	93	91	92	86	80	75	75
TP630	Inlet	81	101	94	91	91	85	79	74	74
	Outlet	97	102	95	94	94	88	82	77	77

Published dB(A) figures are free field sound levels at 3m with spherical propagation at a reference level of 2 x 10⁻¹² Pa. The free field sound power level spectra figure are dB with reference of 10⁻¹² Watts. To ensure minimum noise levels during speed control an auto transformer or inverter speed controller is recommended.

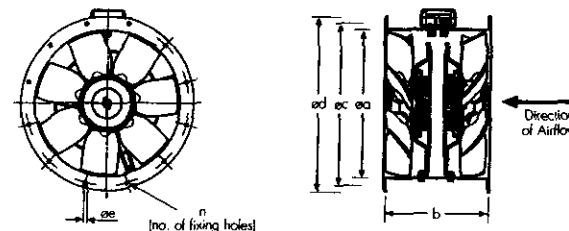
Attenuator Insertion Losses

Dia	63	125	250	500	1k	2k	4k	8k
450	2	4	6	14	17	12	10	6
500	3	4	7	14	17	14	11	7
560	3	4	8	15	18	14	11	7
630	3	4	8	16	18	14	11	7

Attenuator Fitted with Pod Insertion Losses

Dia	63	125	250	500	1k	2k	4k	8k
450	4	8	14	20	28	26	23	19
500	4	8	14	20	29	26	23	19
560	4	9	14	20	29	26	23	19
630	4	9	14	20	29	26	23	19

DIMENSIONS (mm)



Size	Dia	b	ac	ad	ae	n	kg approx
450	450	375	500	537	12	8	36
500	500	375	560	595	12	12	38
560	560	520	620	655	12	12	56
630	630	520	690	725	12	12	63

Vent-Axia

TURBOPROP FANS (TP)

VENT-AXIA TURBOPROP FANS ACCESSORIES

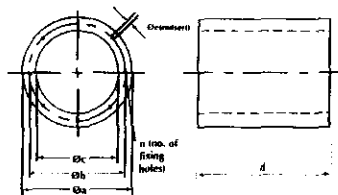
Stock Ref. No.	Electronic Controller Stock Ref. No.	Auto Transformer Stock Ref. No.	Inverter Kit 3ph in/out Stock Ref. No.	D.O.L. Starter Stock Ref. No.	Ancillary* Pack Stock Ref. No.	Mounting Feet (pair) Stock Ref. No.	Coupling Flange Stock Ref. No.
TP450-14	103 03 110A	103 14 107	103 20 302 04	103 11 240 + 103 12 070	105 13 450	105 03 450	105 06 450
TP450-34	—	103 14 304	103 20 302 04	103 11 415 + 103 12 040	105 13 450	105 03 450	105 06 450
TP500-14	103 03 110A	103 14 113	103 20 303 01	103 11 240 + 103 12 105	105 13 500	105 03 500	105 06 500
TP500-34	—	103 14 304	103 20 303 01	103 11 475 + 103 12 040	105 13 500	105 03 500	105 06 500
TP560-14	—	—	103 20 305 04	103 11 240 + 103 12 039	105 13 560	105 03 560	105 06 560
TP560-34	—	—	103 20 305 04	103 11 415 + 103 12 070	105 13 560	105 03 560	105 06 560
TP630-14	—	—	—	103 11 240 + 103 12 039	105 13 630	105 03 630	105 06 630
TP630-34	—	—	103 20 350 02	103 11 475 + 103 12 105	105 13 630	105 03 630	105 06 630



Stock Ref. No.	Inlet Wire Guard Stock Ref. No.	Case Axial Attenuator Stock Ref. No.	Case Axial Attenuator incl. Pod Stock Ref. No.	Anti-Vibration Mounts Stock Ref. No.
TP450-14	105 05 450	105 14 450	105 00 450	105 23 033
TP450-34	—	—	—	—
TP500-14	105 05 500	105 14 500	105 00 500	105 23 033
TP500-34	—	—	—	—
TP560-14	105 05 560	105 14 560	105 00 560	105 23 033
TP560-34	—	—	—	—
TP630-14	105 05 630	105 14 630	105 00 630	105 23 033
TP630-34	—	—	—	—

Guards. Some installations may occur where additional safety parts are needed, to ensure safety in operation. For example, the unit may be fitted at the inlet or outlet end of a ducted ventilation system, thereby exposing the impeller/motor to unguarded access. In this event, the installer must fit a safety guard complying to current regulations. These guards are available as an optional extra.

ACCESSORIES DIMENSIONS (mm)

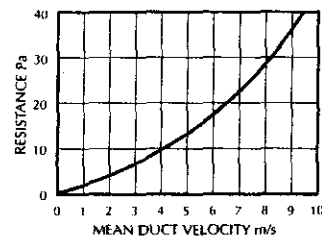


CASE AXIAL ATTENUATOR

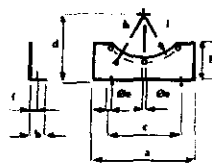
Stock Ref. No.	Øa	bØ	Øc	d	Øe*	n	kg approx	Fitted with pod kg approx	Free area m² without pod
105 14 450	550	500	450	675	M10	8	50	73	0.15904
105 14 500	600	560	500	750	M10	12	59	87	0.19635
105 14 560	660	620	560	840	M10	12	70	102	0.24630
105 14 630	730	690	630	940	M10	12	82	120	0.31172

* Threaded hole to take bolt

RESISTANCE GRAPH FOR CASE ATTENUATOR FITTED WITH POD

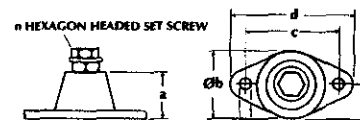


TURBOPROP FANS ACCESSORIES DIMENSIONS (mm)



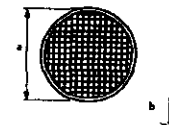
MOUNTING FEET

Stock Ref. No.	a	b	c	d	Øe	f	g	h	i
105 03 450	384	24	315	315	12	14	155	250	238
105 03 500	425	24	315	315	12	14	135	280	268
105 03 560	475	24	355	355	12	14	155	310	298
105 03 630	520	24	400	400	12	14	175	345	333



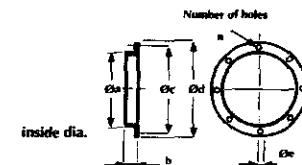
ANTI-VIBRATION MOUNTS

Stock Ref. No.	a	Øb	c	d	e	Øf	n	Max load kg
105 23 033	27	37	54	67	18.5	7	M8	23



INLET WIRE GUARD *K' factor loss 0.25

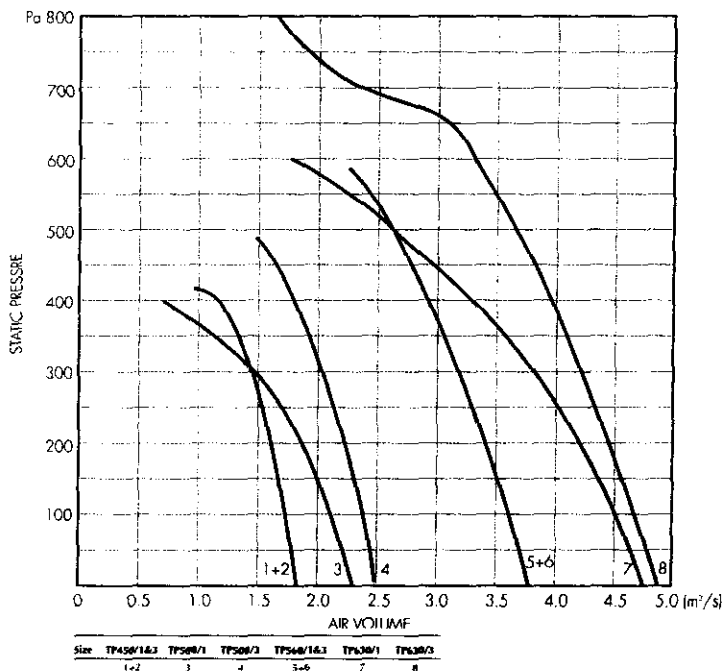
Stock Ref. No.	Øa	b
105 05 450	525	3
105 05 500	595	3
105 05 560	655	3
105 05 630	725	3



COUPLING FLANGE

Stock Ref. No.	Øa	b	Øc	Ød	Øe	n
105 06 450	450	60	500	537	12	8
105 06 500	500	60	560	595	12	8
105 06 560	560	75	620	655	12	12
105 06 630	630	75	690	725	12	12

PERFORMANCE



D Range High Static Systems

R410A

INVERTER Air Conditioner

The D range high static ducted systems are the ideal solution for flexible, concealed air conditioning of large areas such as retail and entertainment projects.

- High static pressure available for optimum air distribution
- Low operating sound levels
- R410A refrigerant
- Highly efficient scroll compressor
- Piping length up to 100m
- Cooling and heating operation down to -15°C
- Multifunctional wireless remote control with built-in temperature control
- Piping outlet in three directions
- Fresh air knockout for improved air quality

System example

An inspection port (450 x 450mm or more) is required at the lower side of the indoor unit body. Distributor (field supply)

Options

Timer remote controller



RCS-TM80BG

Wireless remote controller

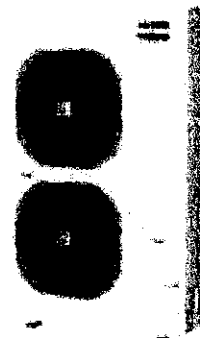


RCS-8H80AG.WLB

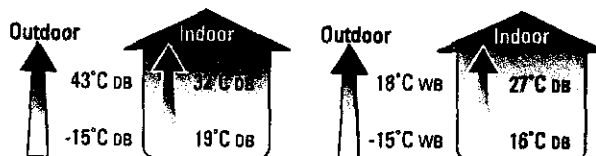
Simplified remote controller



RCS-KR1AGB



The D range of high capacity ducted units make an ideal solution when heating or cooling large open plan areas such as car showrooms, theatres, studios and similar applications. The high static pressure (215pa - size 905) makes the use of extended ductwork practicable, which allows the indoor unit to be concealed within a suitable area of the building.



Big PACi					
Model size		NEW 70		NEW 90	
Capacity	kW	Cooling	Heating	Cooling	Heating
		20.0	22.4	25.0	28.0
D Type		D0705H8		D0905H8	

		size 705		size 905	
Performance		Cooling	Heating	Cooling	Heating
Capacity	kW	6.0 - 20.0 - 22.4	6.0 - 22.4 - 25.0	6.0 - 25.0 - 28.0	6.0 - 28.0 - 31.5
Power input	W	7.12	6.5	9.55	8.2
SEER/COP	W/W	2.81	3.45	2.62	3.44
Energy class	-	C	B	D	B
UK Total	kW	19.26	16.8	24.1	21.0
UK Sensible	kW	15.23	-	19.16	-
Running current	Amps	14.8	15.2	21.1	21.2
Indoor Unit		SPW-D0705H		SPW-D0905H8	
Air circulation	(H/M/L) m³/h	3360/3186/2976		4320/4200/3960	
Moisture removal	Litres/h	8.4	-	13.2	-
External static pressure	(H) Pa	176		216	
Sound pressure level	(H/M/L) dB(A)	48/47/46		51/50/49	
Dimensions	(HxWxD) mm	467x1428x1230		517x1504x1230	
Net weight	kg	110		120	
Power supply	V,ph,Hz	230, 1+N, 50		230, 1+N, 50	
Outdoor Unit		SPW-C706VH8		SPW-C906VH8	
Sound pressure level	(H/L) dB(A)	58/57		58/57	
Dimensions	(H/W/D) mm	1526x940x340		1526x940x340	
Net weight	kg	118		128	
Power supply	V,ph,Hz	400, 3+N, 50		400, 3+N, 50	
Refrigerant circuit		size 705		size 905	
Tube diameter narrow/wide	mm(in)	12.7/22.2		12.7/28.58	
Max piping length	m	100		100	
Max elevation difference - O.U. above/below I.U.	m	50/30		50/30	
Chargeless piping length	m	30		30	
Amount of additional refrigerant	g/m	80		80	
Recommended fuse size		16		20	
Communication cables		2 core 0.75 mm shielded		2 core 0.75 mm shielded	

Power supply to outdoor unit, the indoor unit can take its power from the outdoor unit or a separate supply. When using Big PACi with multi indoor units, units must all be of the same type

UK Conditions: Cooling Indoor 23°C DB 50% RH Outdoor 30°C Heating Indoor 20°C Outdoor 0°C
Rating Conditions: Cooling Indoor 27°C DB 19°C WB Outdoor 35°C DB 24°C WB Heating Indoor 20°C DB Outdoor 7°C DB 6°C WB



L'UNITE
HERMETIQUE

SILENSYS CONDENSING UNITS

LOW BACK PRESSURE REFRIGERATION

Model	Compressor	Nominal Power (HP)	Displacement (CM ³)	Noise Level (dBA) @ 1 m	Refrigerating Capacity (Watts)		
					-40°C	-30°C	-20°C
B08Z	CAJ2432Z	3/4	18.30	45	223	446	695
B09Z	CAJ2440Z	1	21.00	48	242	487	836
B10Z	CAJ/TAJ2446Z	1	26.15	51	263	571	948
B15Z	CAJ/TAJ2464Z	1 1/2	34.45	51	328	809	1,306
B22Z	TFH2480Z	2	53.20	53	609	1,238	1,950
B29Z	TFH2511Z	2 3/4	74.25	56	709	1,592	2,549
B43Z	TAG2516Z	4	112.50	59	1,191	2,389	3,871
B53Z	TAG2522Z	5 1/2	134.80	60	2,159	3,009	4,768

HIGH BACK PRESSURE REFRIGERATION

Model	Compressor	Nominal Power (HP)	Displacement (CM ³)	Noise Level (dBA) @ 1 m	Refrigerating Capacity (Watts)		
					-5°C	0°C	+5°C
H14Z	CAE9460Z	1/2	11.3	48	956	1,117	1,291
H21Z	CAJ/TAJ9480Z	2/3	15.2	48	1,392	1,624	1,880
H25Z	CAJ/TAJ9510Z	1	18.3	51	1,691	1,973	2,268
H30Z	CAJ/TAJ9513Z	1 1/8	24.2	52	2,034	2,365	2,715
H38Z	CAJ/TAJ4517Z	1 1/2	25.95	54	2,565	3,029	3,479
H49Z	CAJ/TAJ4519Z	1 3/5	34.45	55	3,243	3,803	4,386
H54Z	FH/TFH4524Z	2	43.5	53	3,538	4,160	4,832
H71Z	FH/TFH4531Z	2 3/5	56.65	58	4,759	5,559	6,400
H84Z	FH/TFH4540Z	3 2/7	74.25	61	5,642	6,593	7,593
H116Z	TAG4546Z	3 4/5	90.2	64	6,778	8,227	9,846
H123Z	TAG4553Z	4 2/5	100.7	65	7,158	8,650	10,310
H143Z	TAG4561Z	5	112.5	65	8,314	10,089	12,060
H162Z	TAG4568Z	5 5/7	124.4	65	9,649	11,620	13,710
H166Z	TAG4573Z	6	134.8	64	9,824	11,759	13,918