



# - Air Handling Units

## Penta Post Construction Direct Drive and Belt Drive Fan Arrangements



- ❑ Rigid Aluminium Extruded Frame
- ❑ Aluminium Cast Corners
- ❑ Quick Release ¼ Turn, hinged or lift off Access Panels
- ❑ 25 or 50mm Double Skin (DSK) option c/w 60Kg/m<sup>3</sup> Rockwool Insulation
- ❑ Single Skin (SSK) option with Pyrosorb Insulation
- ❑ Steel Channel Base included
- ❑ Galvanised or Powdercoat Finish
- ❑ Air Volumes – 0.2 to 10.0m<sup>3</sup>/sec

### Direct Driven Fan



Double Inlet, Galvanised Steel Construction. Individually formed Forward Curved blades. Integral motor, Capacitor start, 4 or 6 pole, Open frame construction, built to IEC 107/10 and NEMA Standards. Ball Race type shaft bearings, hermetically sealed, pre-greased and self aligning.

### Belt Driven Fan



Double Inlet, Galvanised Steel Construction. Individually formed Forward or Backward curved blades. Fitted with Neoprene flexible connection, mounted to an Adjustable base frame c/w Anti-Vibration mounts. Standard bearings as Direct Driven fan, Plummer block Bearings available.

### Motor



Totally Enclosed Fan Cooled to IP55. Class F Insulation. Single or Three phase. Two or Four pole, Twin Speed Motors or Inverter Control

### Belts & Pulleys



Twin belts fitted as standard. Drive guards available

### Our Controls Package includes the following components as specified or as requested



Integral Thermostats sensing incoming air. Each Thermostat switching up to 4kW per stage. Set at 5° C steps, switching differential is + or - 2° C.



Multistage Electronic Thermostat and Duct Sensor available on heaters 12kW and above.



Close Control and Constant Temperature is achieved by a Thyristor Controller (TC) (Pulse switching via Triac). Supply Air duct sensor is supplied or Remote 0 – 10 V dc Signal.



Fan fuses and Heater Fuses are fitted as standard. Electrical Enclosures include Mains Terminals & Isolator  
Belt Driven Fan motors are protected by Overload and Contactor. Direct Drive Fans are protected by thermal device.

### Electric Heaters



Electric Heaters are manufactured from pure Nickel Chrome open coil wire, Ceramic supports and Zintec Frames. Fitted directly to the fan outlet, this ensures a low surface temperature and residual heat, hence Run On Timers are not required. Element Overheat Protection is provided via Fuses, Airflow switch contactor / relay and Thermal Cutout Device.



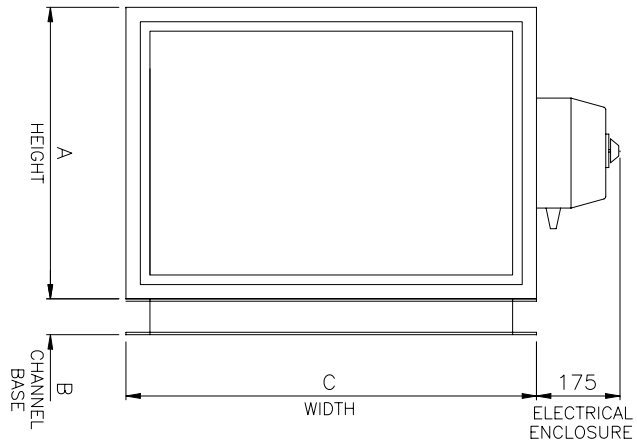
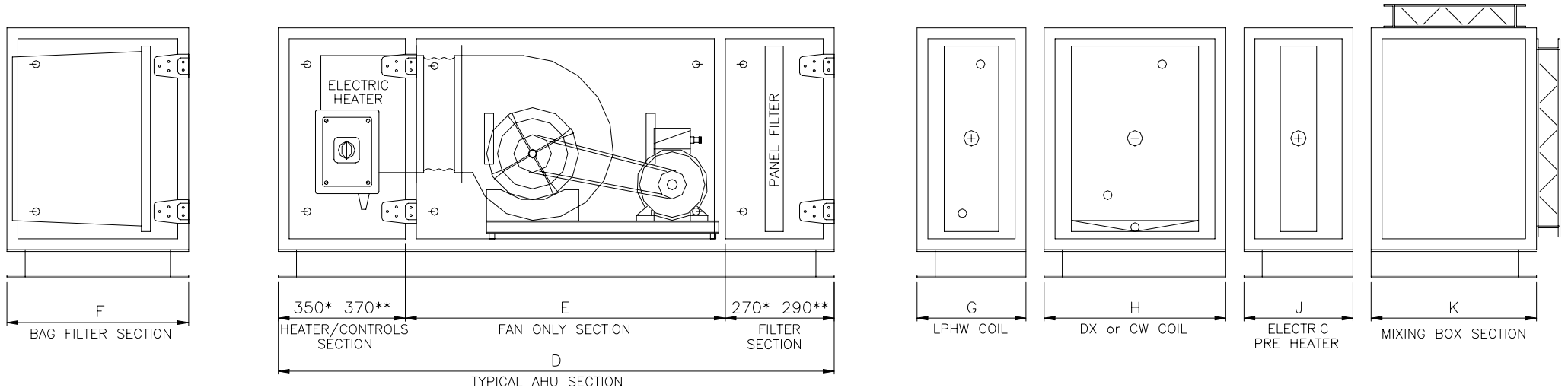
# Guideline for Belt Driven Fan Selection and Performance

Consult Sales for Individual Selections

FA 400 PP/BD/ADN 180					FA 450 PP/BD/ADN 200					FA 500 PP/BD/ADN 225					FA 550 PP/BD/ADN 250				
Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed	Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed	Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed	Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed
kW	m3/Sec	Pa	dB(A)	RPM	kW	m3/Sec	Pa	dB(A)	RPM	kW	m3/Sec	Pa	dB(A)	RPM	kW	m3/Sec	Pa	dB(A)	RPM
0.33	<b>0.25</b>	300	70	1650	0.55	<b>0.5</b>	400	77	1714	1.1	<b>0.7</b>	500	81	1713	1.5	<b>1.1</b>	500	81	1440
0.37	<b>0.3</b>	350	72	1782	0.75	<b>0.55</b>	450	78	1816	1.5	<b>0.8</b>	550	82	1797	1.5	<b>1.2</b>	550	84	1517
0.55	<b>0.4</b>	400	74	1910	1.1	<b>0.6</b>	500	79	1913	1.5	<b>0.9</b>	600	84	1877	2.2	<b>1.3</b>	600	86	1588
0.55	<b>0.5</b>	450	77	2046	1.5	<b>0.7</b>	600	82	2092	2.2	<b>1.0</b>	650	85	1955	3.0	<b>1.4</b>	650	88	1658
FA 650 PP/BD/ADN 280					FA 750 PP/BD/ADN 315					FA 850 PP/BD/ADN 355					FA 1000 PP/BD/ADN 400				
Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed	Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed	Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed	Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed
kW	m3/Sec	Pa	dB(A)	RPM	kW	m3/Sec	Pa	dB(A)	RPM	kW	m3/Sec	Pa	dB(A)	RPM	kW	m3/Sec	Pa	dB(A)	RPM
2.2	<b>1.6</b>	500	82	1231	3	<b>2.1</b>	500	84	1105	4	<b>2.6</b>	650	87	1127	5.5	<b>3.1</b>	650	86	995
3.0	<b>1.7</b>	550	84	1292	3	<b>2.2</b>	550	85	1159	5.5	<b>2.8</b>	750	89	1211	5.5	<b>3.3</b>	750	88	1069
3.0	<b>1.8</b>	650	86	1403	4	<b>2.3</b>	650	87	1263	5.5	<b>2.9</b>	800	91	1250	7.5	<b>3.6</b>	800	89	1105
3.0	<b>2.0</b>	700	88	1462	5.5	<b>2.5</b>	750	89	1357	7.5	<b>3.0</b>	850	91	1289	7.5	<b>3.8</b>	850	90	1139
FA 1200 PP/BD/ADN 450					FA 1500 PP/BD/ADN 500					FA 15/17 PP/BD/ADN 560					FA 15/20 PP/BD/ADN 630				
Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed	Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed	Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed	Motor Size	Airflow	Total Static Pressure	Approx. Noise Level	Approx. Fan Speed
kW	m3/Sec	Pa	dB(A)	RPM	kW	m3/Sec	Pa	dB(A)	RPM	kW	m3/Sec	Pa	dB(A)	RPM	kW	m3/Sec	Pa	dB(A)	RPM
5.5	<b>4</b>	600	85	860	7.5	<b>5.2</b>	600	85	822	11	<b>6.4</b>	700	88	767	11	<b>7.5</b>	700	88	671
7.5	<b>4.3</b>	700	87	928	11	<b>5.6</b>	700	87	887	11	<b>6.8</b>	800	89	820	15	<b>8.0</b>	800	90	718
7.5	<b>4.6</b>	800	89	993	11	<b>5.9</b>	800	88	948	15	<b>7.2</b>	900	91	869	15	<b>8.5</b>	900	91	761
11	<b>5.0</b>	900	90	1053	11	<b>6.2</b>	900	89	1005	15	<b>7.6</b>	1000	92	917	22	<b>9.0</b>	1000	92	815

For full Dimensional Data, Weights, Access options and Ancilliary Components, please refer to Certified Drawing and Specifications sent on request

GENERAL ARRANGMENT ONLY REFER TO APPROPRIATE CERTIFIED DRAWING FOR INDIVIDUAL APPLICATIONS



FRONT OR REAR VIEW

\* SERIES 250 TO 1000 ONLY \*\* SERIES 1200 TO 15/20 ONLY

PENTAPOST DIRECT DRIVEN DRIVEN (PP/DD) – SSK or DSK

SERIES	A	B	C	D	E	F	G	H	J	K
250	310	75	560	950	330	500	300	500	300	T.B.A.
300	360	75	560	1000	380	500	300	500	300	T.B.A.
350	410	75	660	1050	430	500	300	500	300	T.B.A.
400	475	75	660	1150	530	500	300	500	300	500
450	510	75	760	1150	530	500	300	500	300	500
500	560	75	860	1200	580	500	300	500	300	500
550	610	75	860	1250	630	500	300	500	300	700

PENTAPOST BELT DRIVEN (PP/BD) – SSK or DSK

SERIES	A	B	C	D	E	F	G	H	J	K
400	475	75	660	1400	780	500	300	500	300	500
450	510	75	760	1400	780	500	300	500	300	500
500	560	75	860	1450	830	500	300	500	300	500
550	610	75	860	1500	880	700	300	700	300	700
650	710	75	1060	1550	930	700	300	700	300	700
750	810	75	1160	1700	1080	700	300	700	300	700
850	910	100	1260	1750	1130	700	300	700	300	700
1000	1060	100	1360	1950	1330	700	300	700	300	700
1200	1200	100	1400	1950	1290	700	400	700	400	700
1500	1500	100	1500	2100	1440	700	400	700	400	700
15/17	1500	100	1700	2100	1440	700	400	700	400	700
15/20	1500	100	2000	2100	1440	700	400	700	400	700

TITLE		DATE	
GENERAL ASSEMBLY OF PUMA AIR HANDLING UNITS PENTAPOST RANGE ONLY		29/6/00	
DRAWING No.		DRAWN	
M4/G/PNL 187-01		A.L.	
REV		CHECKED	
M			

REV.	DATE	DRN
J	14.5.02	P.N.
K	18.6.03	P.N.
L	6.4.04	P.N.
M	8.6.04	P.N.

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 TEL (01264) 333305 FAX (01264) 333310

# Standard and Optional Components

## Panel Filter



Panel Filters are manufactured from an extended area Synthetic fabric media, conforming to Eurovent 4/5 Grade G4 to F6 available.

## Bag Filter



High Efficiency Bag Filters are manufactured from microfine glass fibre media offering a high degree of filtration & dust retention conforms to Eurovent 4/5 Grade F5 to F9.

## HEPA Filter



High Efficiency Particulate Air filter (Absolute Filter) Constructed from Galvanised steel case & pleated glass fibre. H10 to H14, 95% to 99.999% Efficiency.

## CW or DX Cooling Coil



Manufactured from copper tube, aluminium fins and galvanised steel casing c/w condensate drip tray & eliminator as required. Fully pressure tested to 140 Bar.

## LPHW Heating Coil



Manufactured from copper tube, aluminium fins, and galvanised steel casing. Steam coils and Gas Fired Heaters are also available, please consult Sales Office.

## Damper & Motor



Volume Control or Positive Shutoff Dampers available with Actuators and Mixing Boxes. For Fire / Smoke & Curtain Blade Damper please refer to our separate Leaflet.

## Silencers



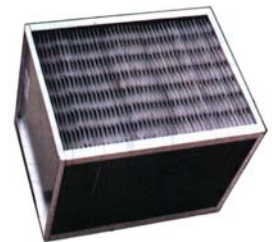
Silencers are constructed from Galvanised sheet steel. Internal pods infilled with tissue faced Rockwool with a density of 60Kg/m<sup>3</sup>.

## Weather Louvre



Manufactured from extruded aluminium, natural finish. Anodised or Powdercoat finish available. Bird screen mesh fitted behind as standard.

## Plate Heat Exchanger



Air to air plate heat exchangers offers up to 70% heat recovery. Face and Bypass Damper option available. Refer to our SAPER leaflets for packaged Supply and Extract Units.

*Over 20 years supplying the  
Ventilation and Air Conditioning  
Industry*



Unit 6, Viscount Court, Walworth Industrial Estate, Andover, Hampshire SP10 5NW England

[www.pumaproducts.co.uk](http://www.pumaproducts.co.uk)

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