

## AIR PURGE UNITS FOR SERIES 5000 & 7000 TYPES 5040 / 5044 / 5051 SINGLE & MULTISTAGE CENTRIFUGAL BLOWERS



5051



5040/44

Both Series 5000 & Series 7000 infra-red monitoring units employ air purging.

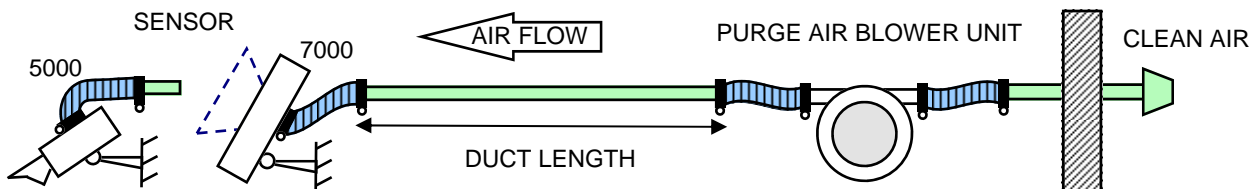
Where a suitable "on site" air supply is not readily available Patol 5000 Series air purge units may be employed.

These devices are single and multistage centrifugal blowers that can be provided in a variety of configurations that accommodate differing application requirements such as air delivery volume / pressure, supply voltage and mounting arrangements.

The units are provided with a 2m flexible supply cable for connection at an adjacent junction box.

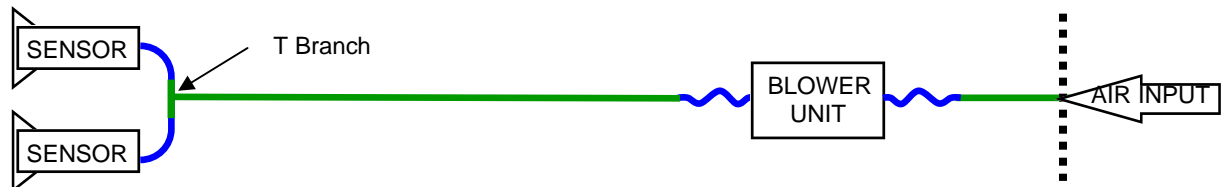
Some units are equipped with an easily removable and washable air filter, however these filters are intended to preserve blower life in *normal* conditions.

The blower should either be installed outside a dirty/dusty area or the unit inlet piped to a *clean* air environment. Intermediate rigid ducting is most readily achieved by the use of standard  $\mu$ PVC pipes and fittings. 2 m of hose is provided with each purge unit for couplings at sensor & blower.



In coal handling plant applications twin conveyors may be required to be monitored.

A single blower may purge both sensors by employing a "T" branch in the air ducting.



In some applications the Air Purge Blower unit (APB) may need to be remote from the Sensor. This may be due to the Sensor being situated at some distance from a "clean air" environment; as in the reclaim tunnels of power station coal handling plants. Similarly, the APB may need to be located in a "Safe Area" on sites with a "Hazardous" classification.

There are limits to the distance that any APB can deliver the required air to the Sensor which are principally dependant on the APB specification and duct bore size. Other factors such as the ducting inner wall surface characteristic and the air temperature/pressure also have an effect.

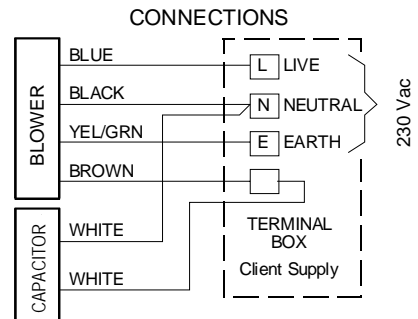
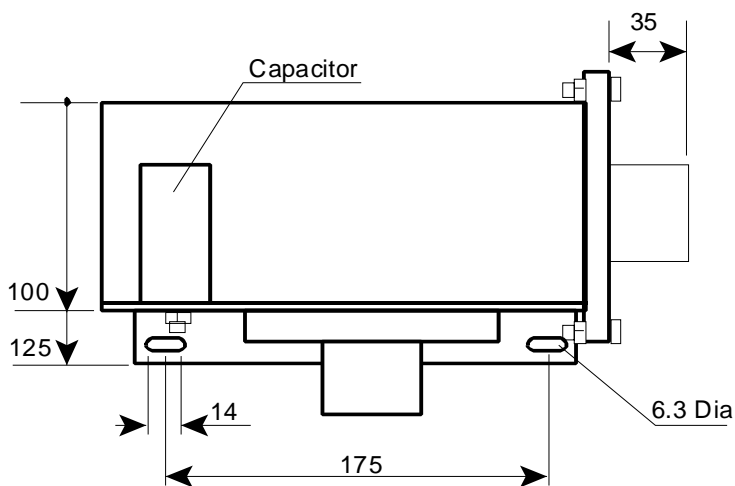
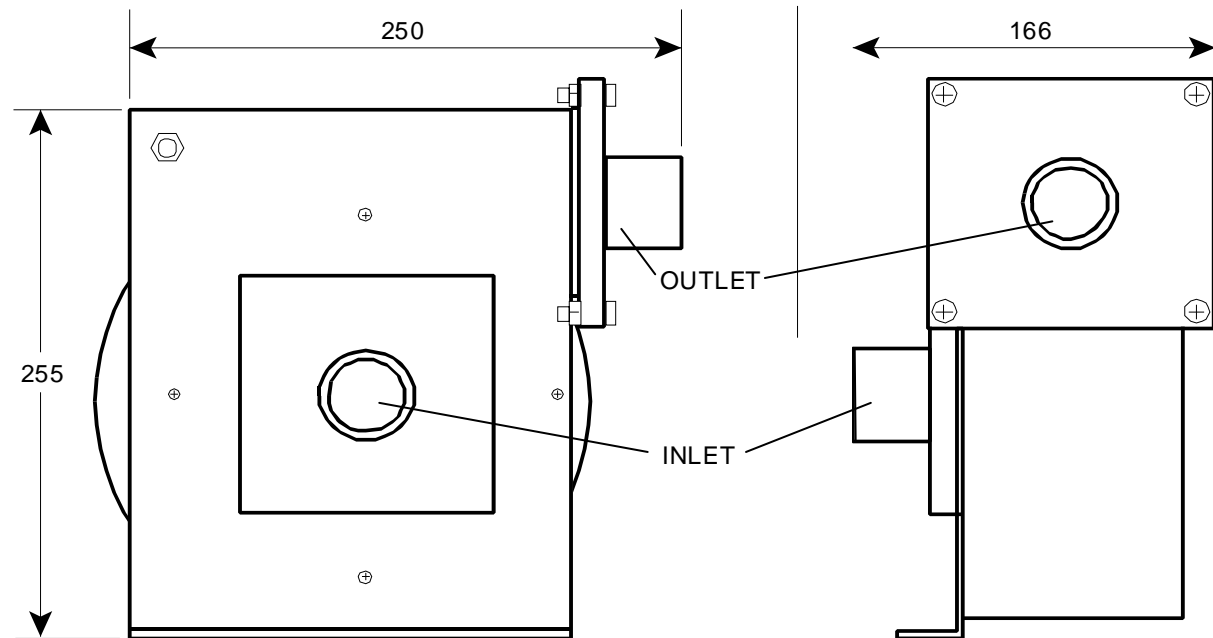
Whilst coupling hoses, reduction fittings and bends also have an effect, the following table indicates typical limitations for smooth bore PVC ducting with the worst case air parameters of minus 20°C at sea level pressure. (Warmer Air enables greater distance)

## AIR PURGE UNITS FOR SERIES 5000 & 7000 UNITS

The table takes to account flexible hose connections at Sensor and Blower. (Approx. 2m total)

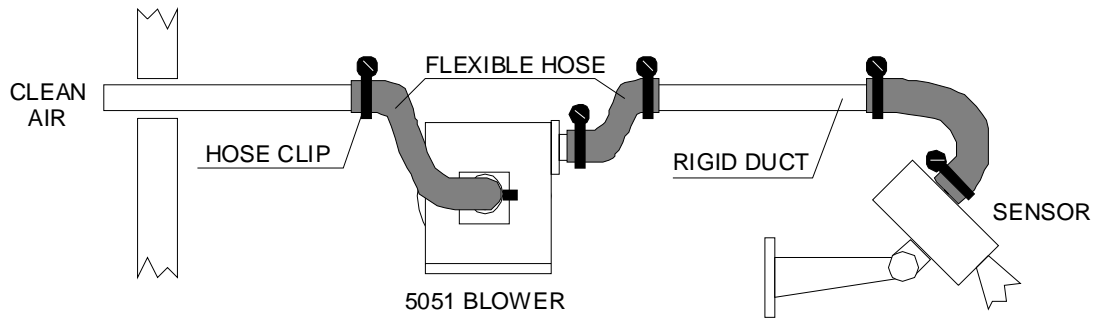
Sensor Qty	Imp. Duct / Pipe		Metric Duct / Pipe		APB to Sensor Duct		
	O/D	I/D	O/D	I/D	5051 1stg.	5040 2stg.	5044 4stg.
1	1-5/16"	1-1/4"	40mm	32mm	n/a	20m	60m
	1-7/8"	1-1/2"	50mm	40mm	10m	50m	140m
	2-3/8"	2"	63mm	50mm	35m	180m	520m
2	1-5/16"	1-1/4"	40mm	32mm	n/a	3m	12m
	1-7/8"	1-1/2"	50mm	40mm	n/a	7m	28m
	2-3/8"	2"	63mm	50mm	n/a	25m	100m
1	Flexible Hose (Non-smooth)		45mm		7m	40m	110m

### Blower Type 5051



**Type 5051** Single stage unit  
 Supply :- 230 Vac 50/60  
 Weight :- 5.1 kg

## AIR PURGE UNITS FOR SERIES 5000 & 7000 UNITS



### Blower Types 5040 & 5044

**Type 5040** 2 stage unit employed on most applications.

Supply :- Available in 115/230 Vac 50/60 Hz options.

Weight :- 5 kg

Delivery :- 5 l/s at 11 mBar - 10 l/s at 7.5 mBar

Size :- See drawings

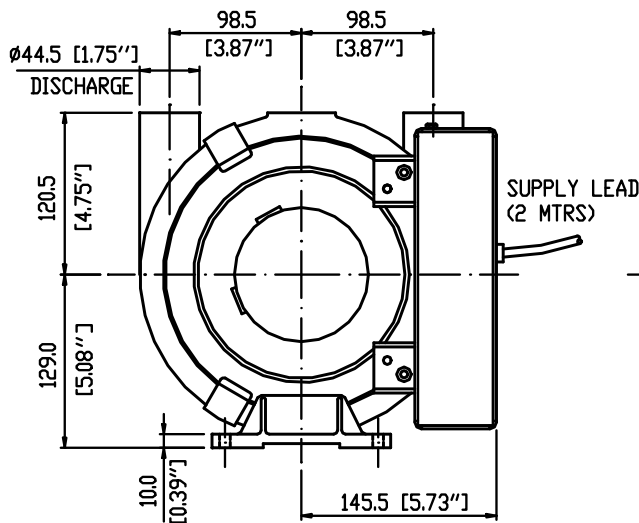
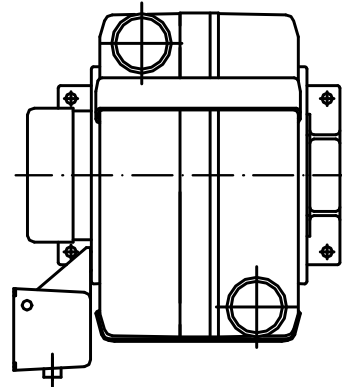
**Type 5044** 4 stage unit.

Supply :- Voltage options as above

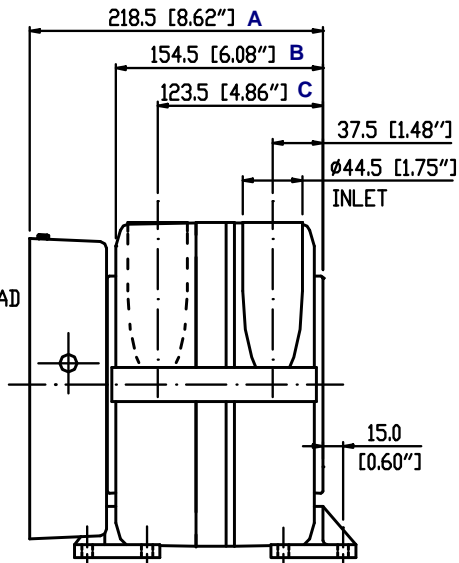
Weight :- 7 kg

Delivery :- 5 l/s at 23.5 mBar - 10 l/s at 19 mBar

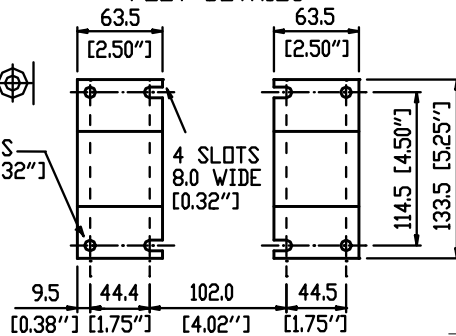
Size :- See table below



**Type 5040**



FEET DETAILS



**Type 5044**

A	B	C	D
264 (10.4")	200 (7.87")	167 (6.57")	147 (5.79")

Dimensional differences from Fig.7