

# Vacuum Producers

## Turbopumps

Dustcontrol's turbopumps are regenerative blowers, both the direct and belt driven models. As the impeller rotates, centrifugal force moves the air from the root of the blade to the tip. Leaving the tip, air flows around the contour of the housing and is picked up at the root of the succeeding blade. The "closed" area of the housing between the outlet and inlet, forces the air to atmosphere. The many blades on the impeller create increasing stages of pressure generation and

result in a very stable pressure differential capability. This pressure generation causes heat to be generated naturally which dissipates in the air flow and through the blower housing. Silencing, particularly on the larger units is very effective.

When two or more units are installed in parallel, they can be operated on demand for maximum efficiency and minimum energy consumption.

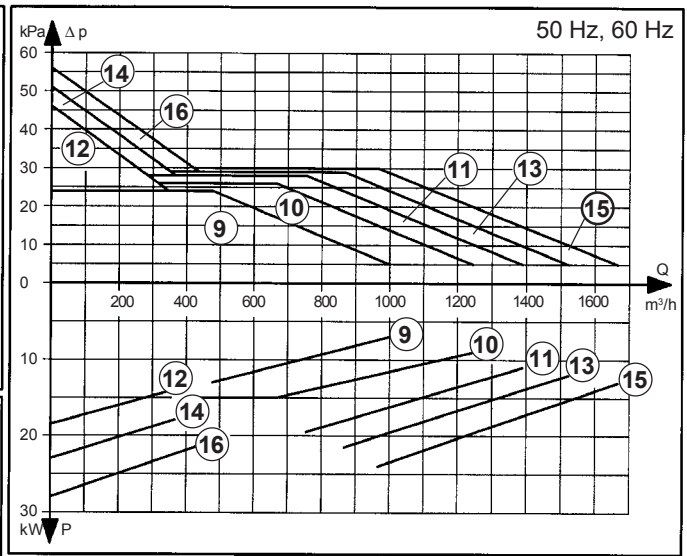
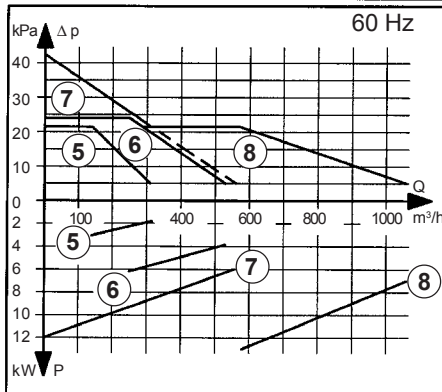
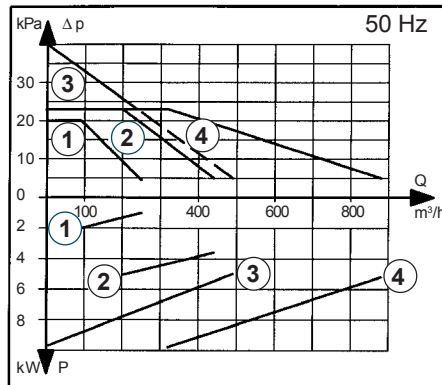
## Radial Blowers

Dustcontrol fans are radial blowers, air is introduced at the center of the fan wheel

and forced outward with centrifugal force toward the fan housing. These fans can be operated fully restricted in a "free-wheeling" condition without adverse effect and can therefore be operated without vacuum relief valves. The fans are designed for pressure and are overloading type units. They cannot be operated without being connected to the restriction of a tubing system. Operation above their maximum rated flow will result in overloading and the motor protection will trip out.

## Turbopumps

Source Extraction, Cleaning, Pneumatic Transportation



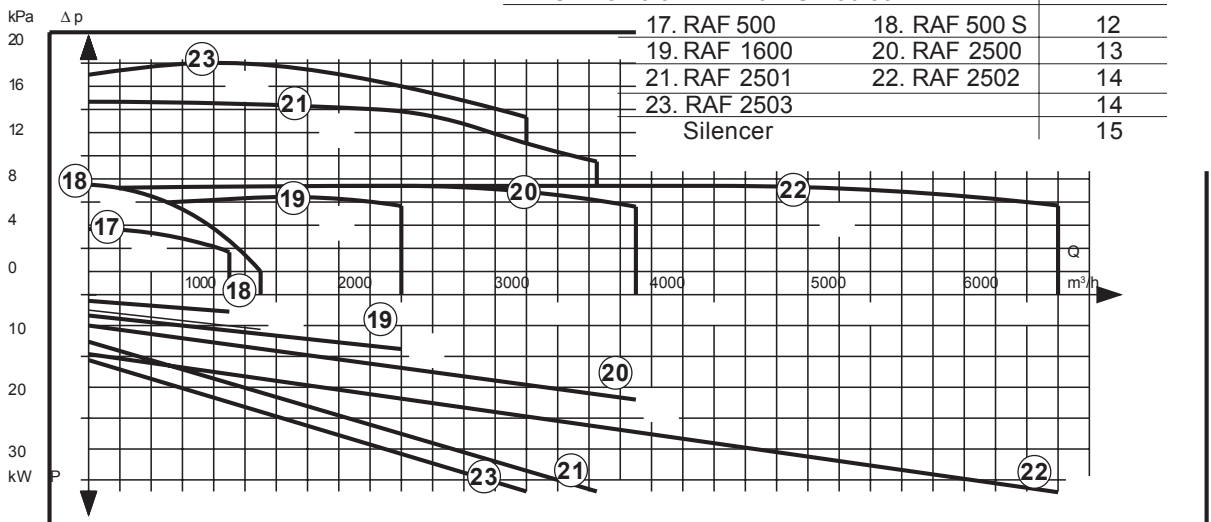
- |                    |                  |
|--------------------|------------------|
| 1. TED 30 2.5 kW   | 5. TED 36 3.0 kW |
| 2. TED 30 5.5 kW   | 6. TED 36 7.5 kW |
| 3. TSD 30 9.2 kW   | 7. TSD 36 11 kW  |
| 4. TPD 30 9.2 kW   | 8. TPD 36 11 kW  |
| 9. TPR 35 11 kW    | 13. TPR 47 22 kW |
| 10. TPR 40 15 kW   | 14. TSR 47 22 kW |
| 11. TPR 43 18.5 kW | 15. TPR 50 30 kW |
| 12. TSR 43 18.5 kW | 16. TSR 50 30 kW |

Page  
8-9

10-11

## Radial Blowers

Fume extraction of fine dust from light material, ie: wood and paper



- |              |               |    |
|--------------|---------------|----|
| 17. RAF 500  | 18. RAF 500 S | 12 |
| 19. RAF 1600 | 20. RAF 2500  | 13 |
| 21. RAF 2501 | 22. RAF 2502  | 14 |
| 23. RAF 2503 |               | 14 |
| Silencer     |               | 15 |

The capacity curves for Dustcontrol vacuum producers have been measured and are stated empirically. Outlet pressure losses from a normal outlet (silencer, back-flow valve/bend) have been accounted for in the curve. Additional equipment such as a diffuser can result in increased pressure loss and must be taken into consideration.

Stated air-flows are for standard air (101.3 kPa@ 20° C). The stated curves are for negative application, all pressures stated are assumed to be below relative atmospheric pressure at sea level. These devices can also be used for positive pressure application and will generate a greater pressure differential.