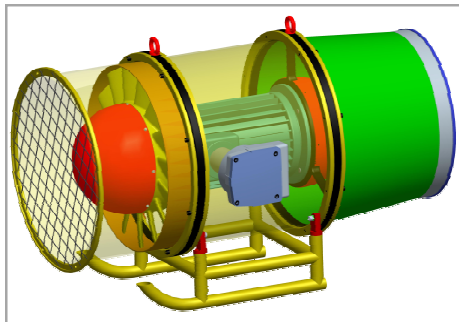




## Axial mining fan type: AVD



### Description

Axial fans are intended for separate ventilation of workshops in methane and non methane regime according to the regulation and technical norms for underground exploitation of coal. Axial fans are used also for ventilation of roads and railroad tunnels and other underground objects.

Flameproof axial mining fan types AVD are designed according to European standards EN1710 and EN13461-1.

### General technical data

| Electrical Characteristics        |                                           |
|-----------------------------------|-------------------------------------------|
| Power [kW]                        | 5,5 ; 7,5 ; 15 ; 18,5 ; 22 ; 30 ; 37 ; 50 |
| Voltage [V a.c.]                  | 400, 500, 550, 690, 100, 1100, 1140       |
| Insulation class of the motor     | F                                         |
| Electric motor thermal protection | 3 x PTC in winding                        |

| Mechanical Characteristics  |                                                                              |
|-----------------------------|------------------------------------------------------------------------------|
| Material of the fan frame   | Steel S235                                                                   |
| Material of the impeller    | Aluminium alloy EN AB-43000<br>EN AB-Al Si 10 Mg (a)                         |
| Corrosion protection method | Impeller, bolts and nuts non corrosion material,<br>housing 2x epoxy painted |

| Explosion Protection | Fan                 | Electric motor  |
|----------------------|---------------------|-----------------|
| Ex protection type   | Ex I M2 c           | Ex I M2 Ex de I |
| Protection class     |                     | IP 55           |
| Certification        | BVS 08 ATEX E 130 X |                 |

| Operating conditions            |                |
|---------------------------------|----------------|
| Permissible ambient temperature | -20°C to +40°C |

### Selection Chart

| Type designation   | Description                                                             |
|--------------------|-------------------------------------------------------------------------|
| AVD - xxx - x - xx |                                                                         |
|                    | power of electric motor [kW]: 5,5 ; 7,5 ; 15 ; 18,5 ; 22 ; 30 ; 37 ; 50 |
|                    | number of impellers: 1 ; 2                                              |
|                    | type: 450 ; 650 ; 700                                                   |
|                    | axial mining fan series                                                 |

#### Optional:

- Silencer for reducing noise level: 1S – one silencer at inlet ; 2S – two silencers (one at inlet, one at outlet)
- Different sizes of outlet tube connection: from 400mm to 1200mm

Other variants possible on request

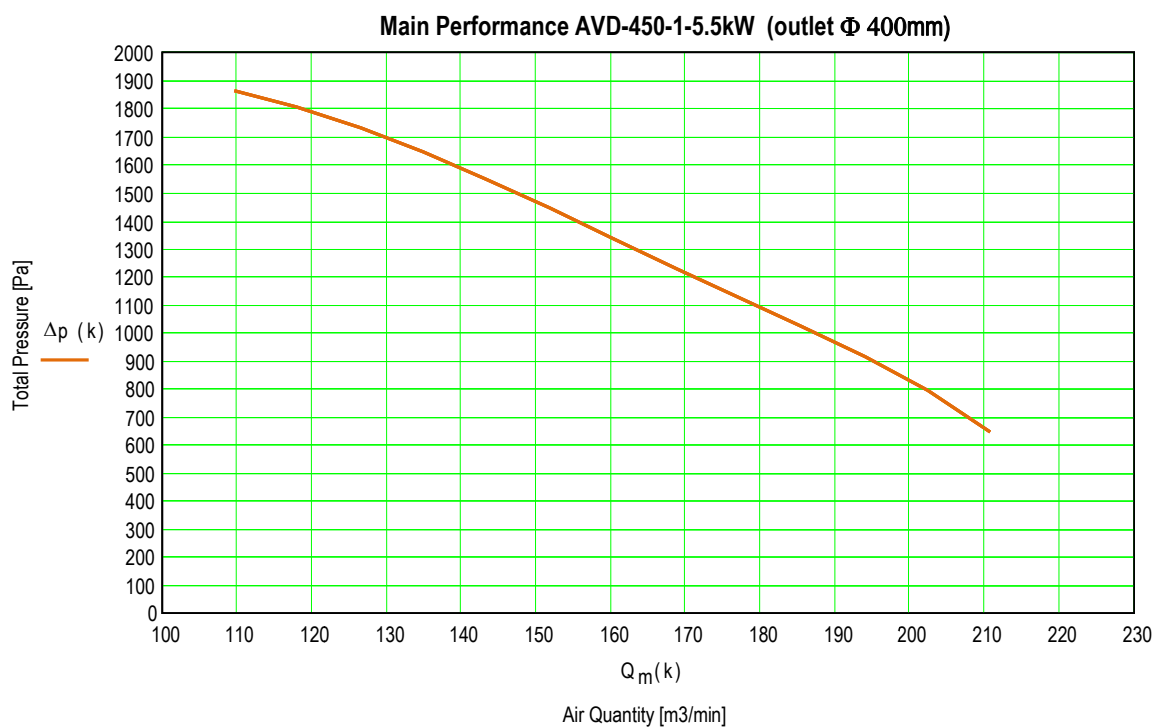


## Common Types Characteristics

| Type           | Max. output quantity<br>[m³/min] | Max. pressure<br>[Pa] | Power<br>[kW] | Speed<br>[rpm] | Noise level of the fans<br>[dB (A)] |            |             | Connection tube diamet.<br>[mm] | Cable glands     | Mass of the complete fan<br>[kg] |
|----------------|----------------------------------|-----------------------|---------------|----------------|-------------------------------------|------------|-------------|---------------------------------|------------------|----------------------------------|
|                |                                  |                       |               |                | w/o silencer                        | 1 silencer | 2 silencers |                                 |                  |                                  |
| AVD-450-1-5,5  | 210                              | 1860                  | 5,5           | 2980           | 85                                  | /          | /           | 400                             | 1x M32<br>1x M20 | 265                              |
| AVD-450-2-7,5  | 285                              | 2080                  | 7,5           | 2925           | 85                                  | /          | /           | 400-500-600                     | 1x M32<br>1x M20 | 276                              |
| AVD-650-1-15   | 500                              | 2650                  | 15            | 2940           | 92                                  | 82         | 80          | 600                             | 1x M40<br>1x M20 | 580                              |
| AVD-650-1-18,5 | 515                              | 2650                  | 18,5          | 2945           | 93                                  | 82         | 78          | 600                             | 1x M40<br>1x M20 | 610                              |
| AVD-650-2-18,5 | 515                              | 3100                  | 18,5          | 2945           | 95                                  | 85         | 80          | 600                             | 1x M40<br>1x M20 | 625                              |
| AVD-650-1-22   | 675                              | 3000                  | 22            | 2930           | 94                                  | 82         | 78          | 600                             | 1x M36<br>1x M20 | 645                              |
| AVD-650-2-30   | 675                              | 4400                  | 30            | 2930           | 103                                 | 86         | 80          | 600-800                         | 1x M50<br>1x M20 | 840                              |
| AVD-650-2-37   | 750                              | 5200                  | 37            | 2930           | 103                                 | 86         | 81          | 600-800                         | 1x M50<br>1x M20 | 870                              |
| AVD-650-1-50   | 1200                             | 3420                  | 50            | 2930           | 102                                 | 85         | 80          | 800<br>1000-1200                | 1x M36<br>1x M20 | 1500                             |

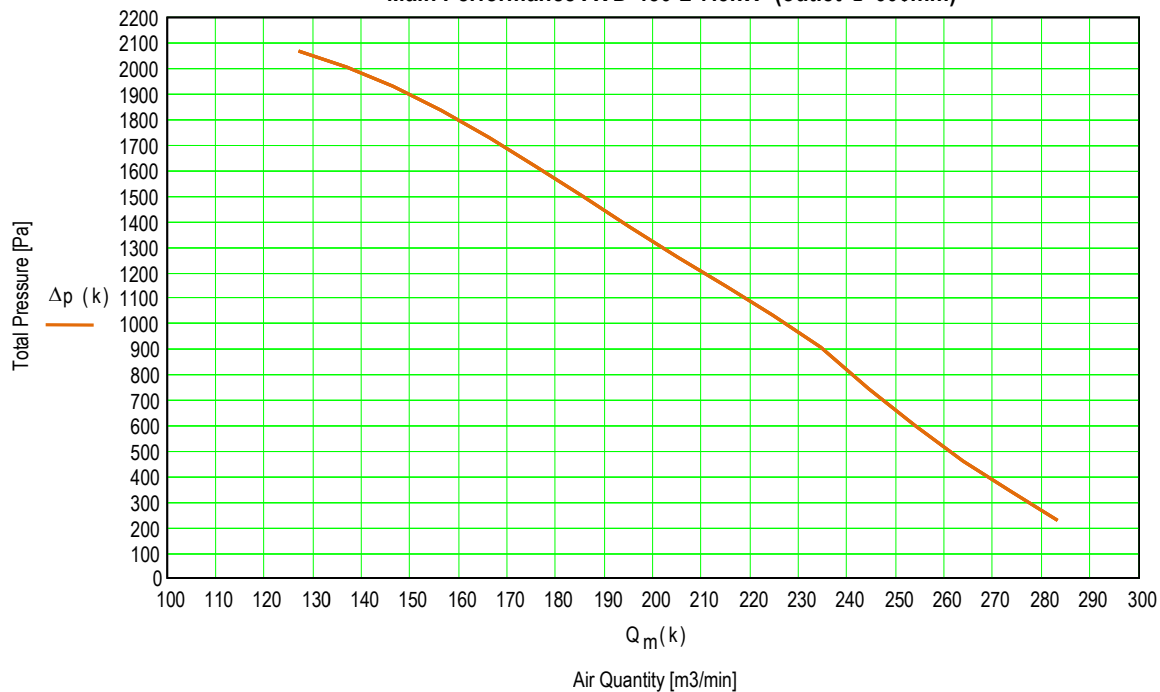
Other variants possible. Data available on customer request.

## Performance characteristics

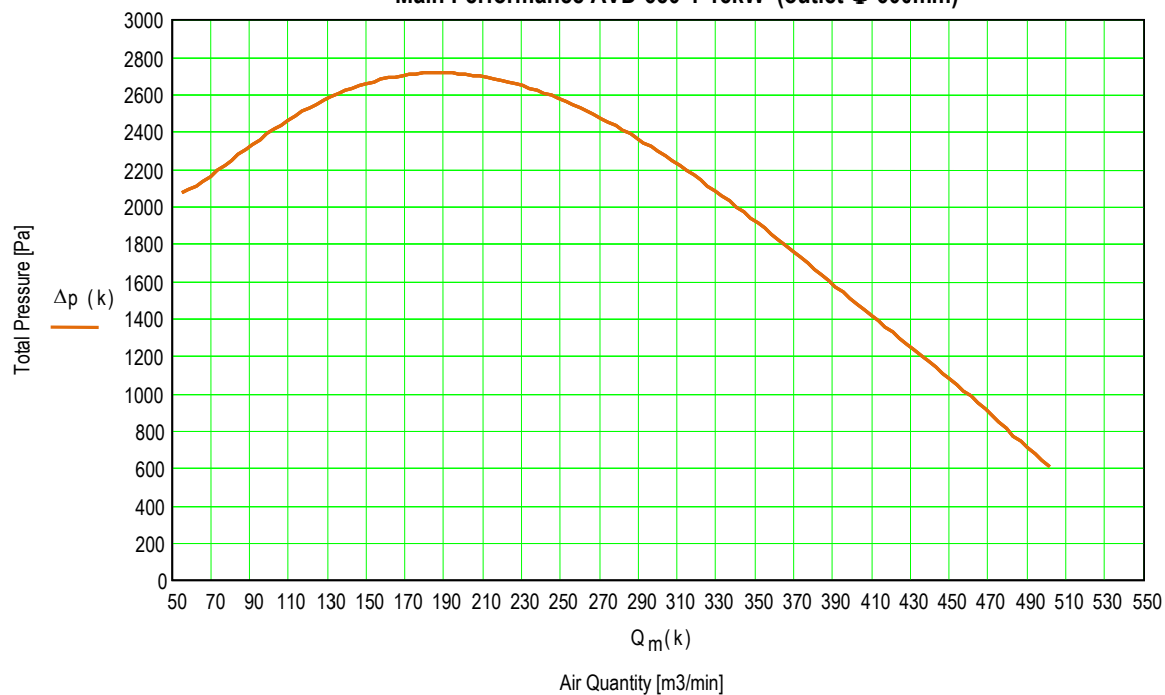




**Main Performance AVD-450-2-7.5kW (outlet  $\Phi$  600mm)**

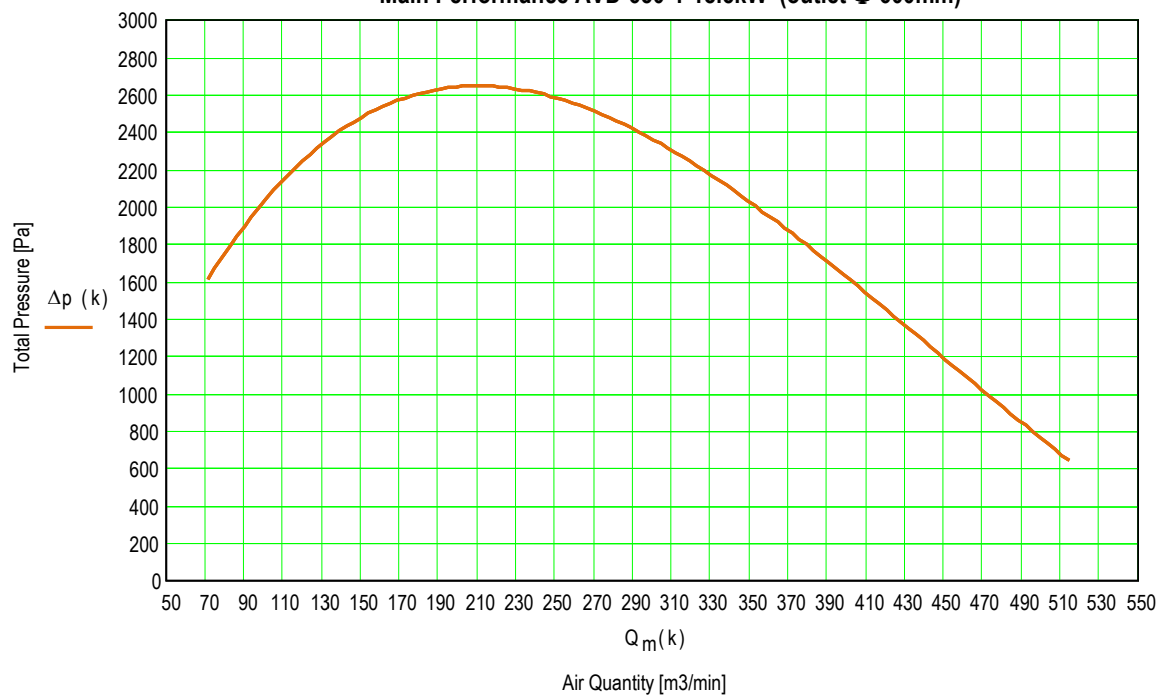


**Main Performance AVD-650-1-15kW (outlet  $\Phi$  600mm)**

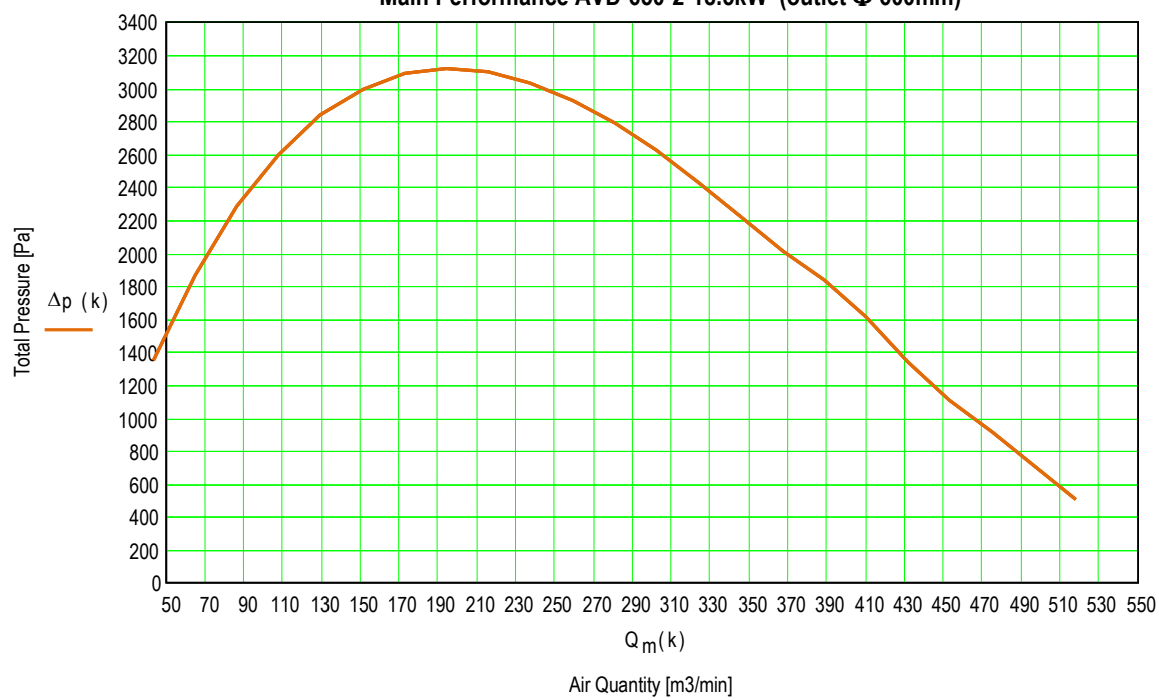




**Main Performance AVD-650-1-18.5kW (outlet  $\Phi$  600mm)**

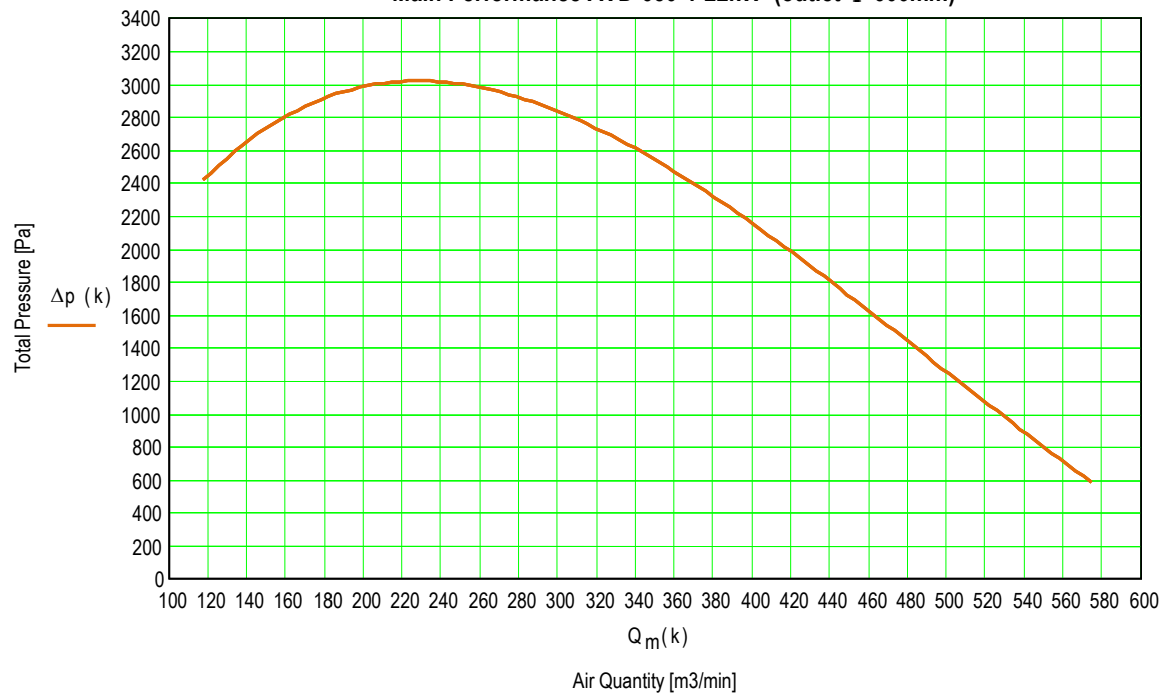


**Main Performance AVD-650-2-18.5kW (outlet  $\Phi$  600mm)**

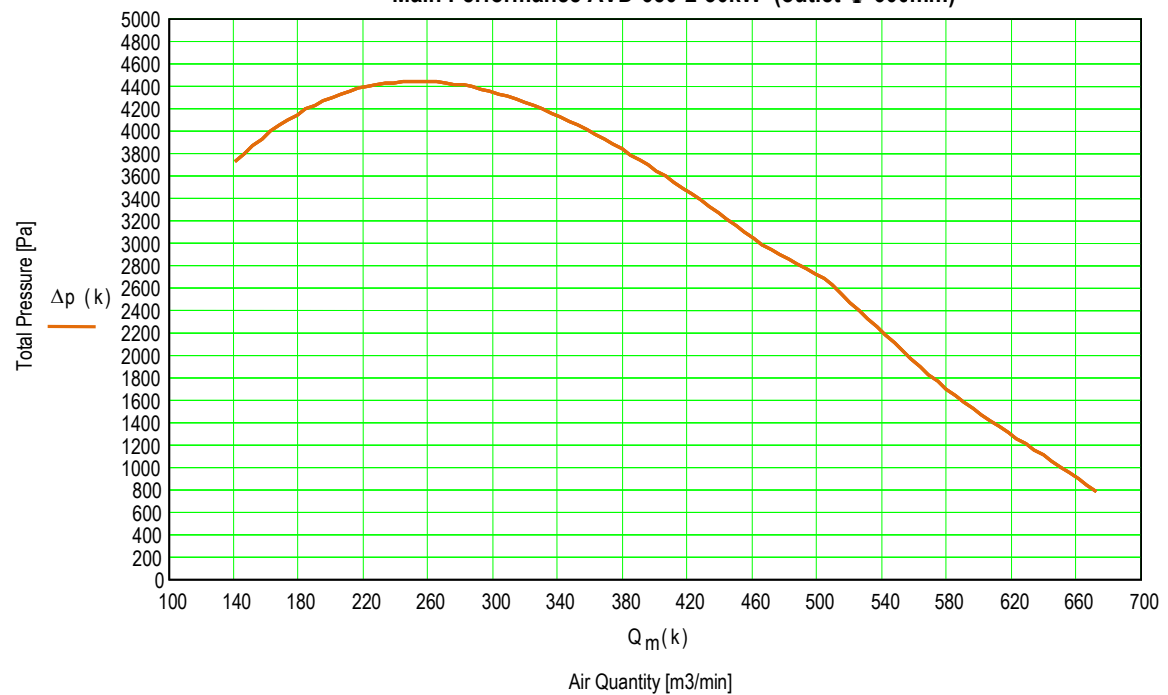




**Main Performance AVD-650-1-22kW (outlet  $\Phi$  600mm)**

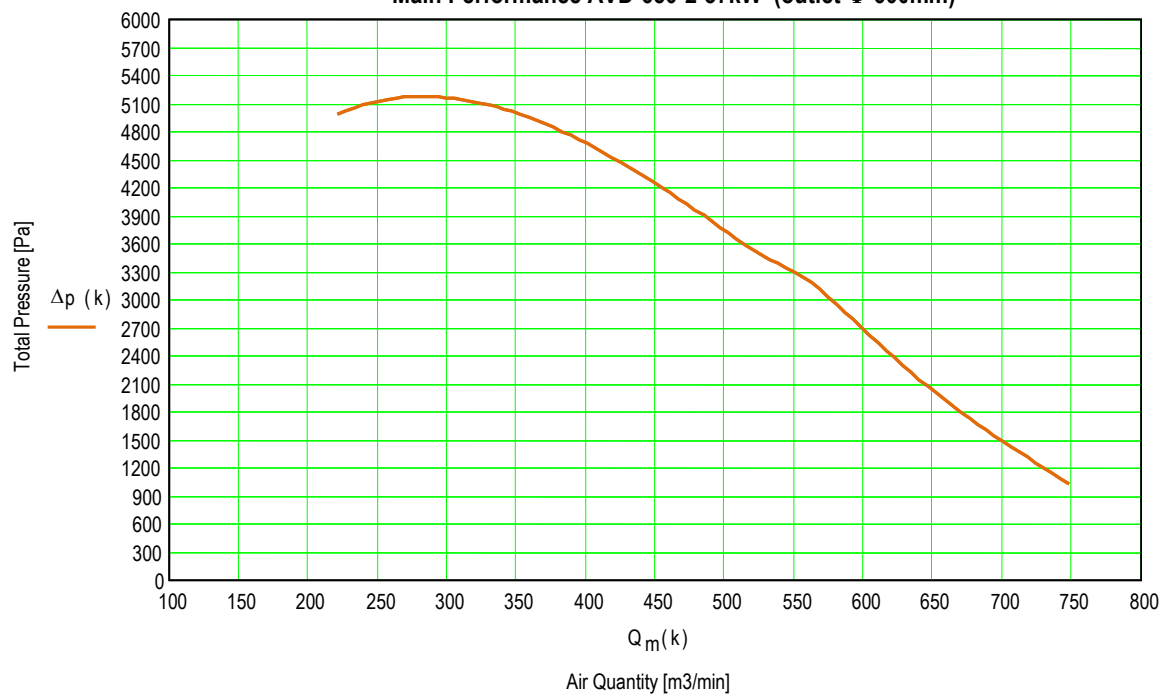


**Main Performance AVD-650-2-30kW (outlet  $\Phi$  600mm)**

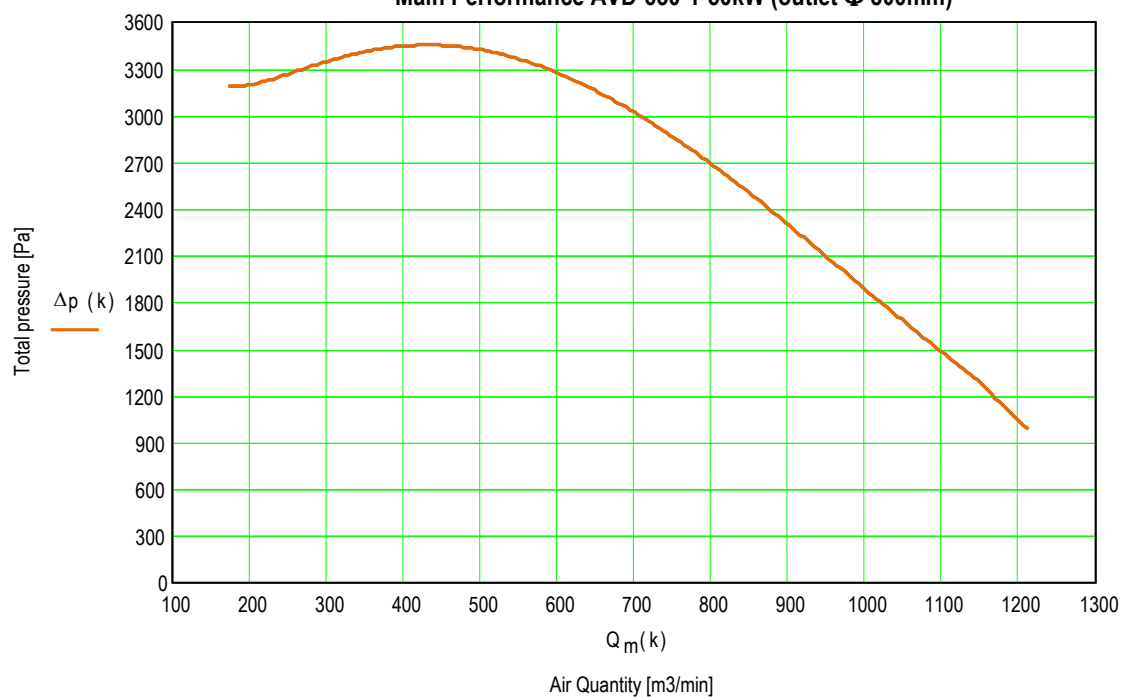




**Main Performance AVD-650-2-37kW (outlet  $\Phi$  600mm)**

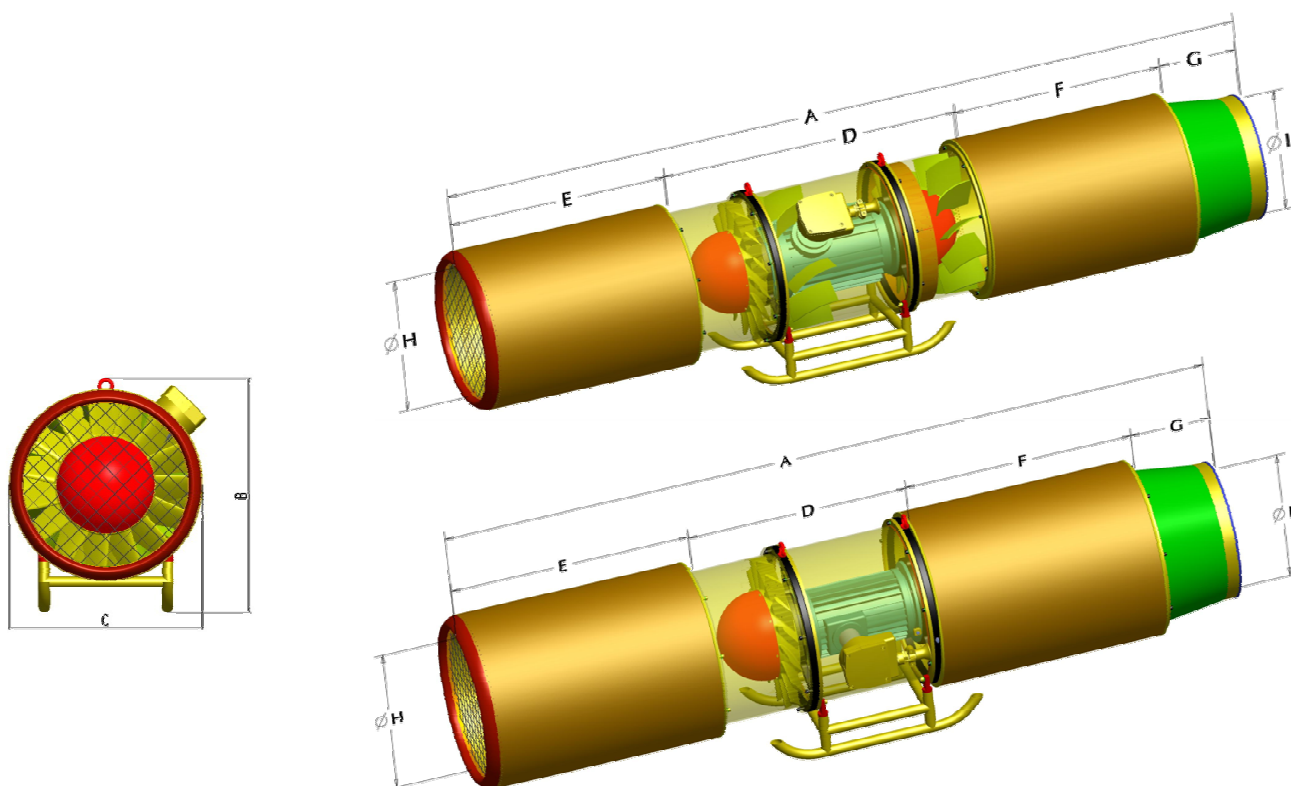


**Main Performance AVD-650-1-50kW (outlet  $\Phi$  800mm)**





## Dimensions



| Type           | A<br>[mm] | B<br>[mm] | C<br>[mm] | D<br>[mm] | E<br>[mm] | F<br>[mm] | G<br>[mm] | Φ H<br>[mm] | Φ I<br>[mm]     |
|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-----------------|
| AVD-450-1-5,5  | 1325      | 563       | 648       | 970       | /         | /         | 355       | 450         | 400             |
| AVD-450-2-7,5  | 1516      | 600       | 684       | 966       | /         | /         | 550       | 450         | 400-500-600     |
| AVD-650-1-15   | 3473      | 924       | 825       | 954       | 1049      | 1000      | 470       | 650         | 500-600         |
| AVD-650-1-18,5 | 3473      | 924       | 825       | 954       | 1049      | 1000      | 470       | 650         | 500-600         |
| AVD-650-2-18,5 | 3833      | 924       | 825       | 1314      | 1049      | 1000      | 470       | 650         | 500-600         |
| AVD-650-1-22   | 3364      | 924       | 825       | 963       | 1049      | 1000      | 470       | 650         | 500-600         |
| AVD-650-2-30   | 3851      | 924       | 825       | 1433      | 1049      | 1000      | 369       | 650         | 500-600-800     |
| AVD-650-2-37   | 3851      | 924       | 825       | 1433      | 1049      | 1000      | 369       | 650         | 500-600-800     |
| AVD-650-1-50   | 4791      | 1304      | 1161      | 1135      | 1582      | 1500      | 574       | 900         | 800<br>100-1200 |