# Industrialized production

The Axipal BZ fans are flexible enough to meet all requirements:

- 11 impeller diameters
- 5 number of blades
- 5 direct coupled speeds
- 1 V-belt drive arrangement

Due to the 6 standard arrangements and their accessories, the fan can easily be adapted to the installation and operating conditions.

## Blades

The blades are made of die-cast aluminium alloy. The blade angle is set at manufacture but can be modified later.

Depending upon the performance required it can vary from 7° to 37°.

## Hubs

The impeller's hub is composed of 2 halves of pressed carbon steel, incorporating recesses to house the blade root. Each blade being fixed by 2 bolts situated at each side of the root to lock the blade pitch angle.

## Centre Boss

The tapered centre boss ensures that any radial or axial movement of the impeller is prevented.

The center boss is a standard component and can be readily interchangable to adapt to various motor shaft sizes.

## Hub cap

The hub cap is formed from aluminium alloy sheet.

Its shape is designed to ensure optimum air entry conditions and efficiency.

## Motor support arms

Made of carbon steel components and assembled by bolting. Their shape and position have been designed to minimise air turbulence.

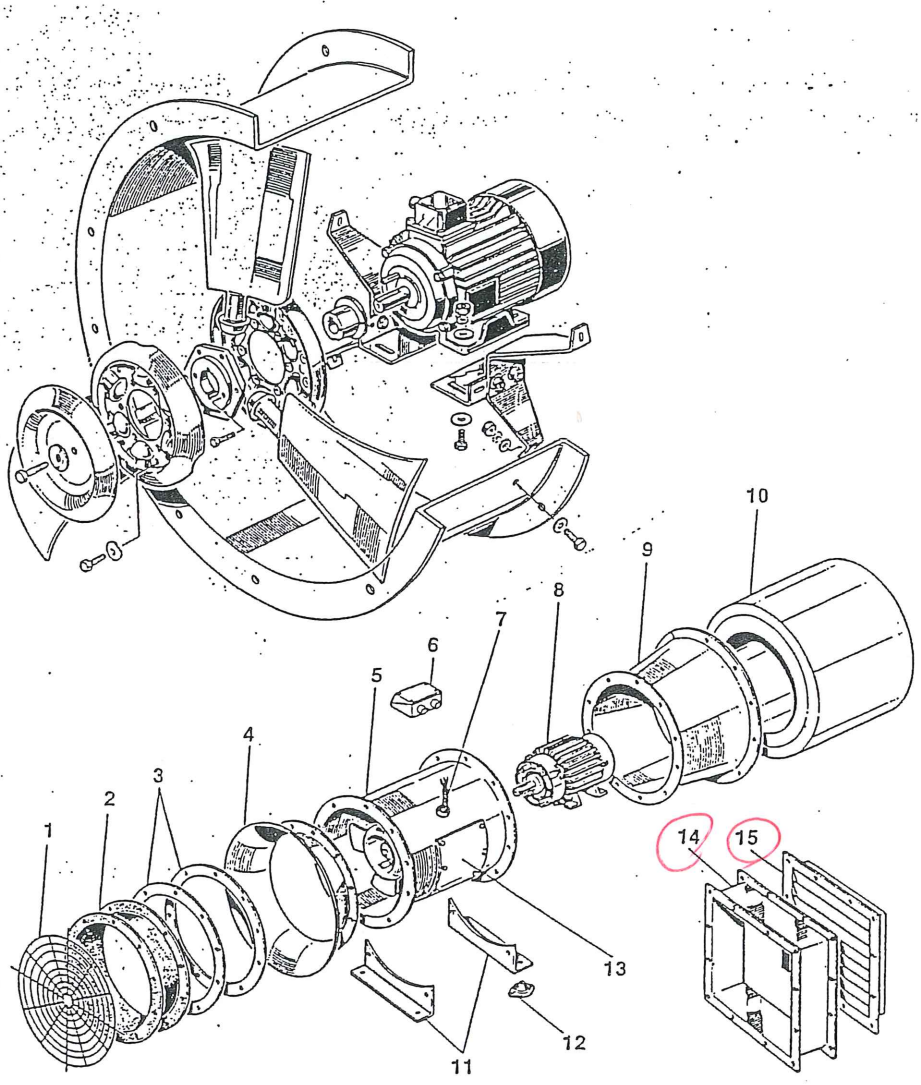
The bolted construction of the static components has been specially tested in order to insure its resistance against vibrations.

Avaible in welded construction for some particular applications.

## Casing

The cylindrical casing is made from welded carbon steel sheet formed with special automatic machines.

It includes flanges for connection to the duct work, and for the fixing of standard accessories.




1. Inlet wire guard as per standard NF EN 294
2. Flexible connection sleeve:
   - 1 flanged side
   - 2 flanged sides
3. Counter-flanges
4. Inlet cone (with or without wire guard)
5. Special coatings on request:
   - Zinc galvanized
   - Hot dip galvanization
   - Rubber lining
   - Epoxy, etc.
6. Motor terminal box (mounted externally)
7. Motor cable gland
8. Electric drive motor*:
   - 1 speed
   - 2 speeds
   - Explosion proof
   - High temperature
   - Energy saving
   - Smoke removal
9. Outlet diffuser (non standard)
10. Cylindrical silencer
11. Mounting feet
12. Anti-vibration pad
13. Access-door
14. Connection for square louvre damper
15. Square louvre damper

Other accessories can be recommended:
- Inlet guide vanes
- Frequency converters

*Assembly according to technological and aerodynamic limits

## RECOOLER DESIGN:

### Heat Exchanger: ( valid for rotor + stator air cooler)

| | | |
|---|---|---|
| filling volume | lt | 200 |
| operating pressure | barg | 16.2 |
| design pressure | barg | 20 |
| test pressure | barg | 30 |
| manufacturer | | Luwa |
| number | | 2 |
| type | | |
| dimension | mm | 2052 x 684 |
| configuration of tubes | | 8R / 2P |
| connection flange | - inlet / outlet | 1 x Flange ANSI 8", 300 lbs each |
| Inspection flange | | 2 x Flange ANSI 4", 300 lbs |
| ventilation | | ½" i |
| drainage | | ½" i |

### Fan:

| | | |
|---|---|---|
| manufacturer | | ABB Normelec AG |
| number of fans | | 2+1 ( 3 x 50 %) |
| fan diameter | mm | 700 |
| type | | BZ MAa-70-3-22 |
| fan speed | $min^{-1}$ | 1740 |
| blade angle | degr. | 22° |
| fan shaft output | kW | 3.4 ( at 20 °C) |

### Fan drive

| | | |
|---|---|---|
| Type of drive | | Electric motor mech. acc. to IEC |
| manufacturer | | ABB |
| number | | 3 |
| type | | M2AA 112 M-4 |
| motor nominal rating | kW | 4.6 |
| rated speed | $min^{-1}$ | 1740 |
| voltage | V | 440 +/- 10% |
| frequency | Hz | 60 +/- 5% |
| rated current | A | 8.6 |
| starting current | A | 6.0 |
| mounting arrangement | | V5( TEFC) |
| degree of protection | motor | IP 55 |
| class of insulation | | F/B |
| cosines phi | | 0.78 |
| efficiency | % | 84 |
| space heater | | 1 phase 110V/60 Hz |
| color code | | manufacturer standard |