



ALMECO

air and water technologies



FAN IMPELLERS & FAN CASINGS

These fan impellers are designed for axial fans used in cooling towers and air-cooled condensers to secure failure-free operation in the heaviest working conditions.

Basic parameters of offered impellers:

- Blades made of fiberglass reinforced polyester,
- Smooth surface protected by UV resistant gelcoat,
- Twisted blade shape,
- Protected blade leading edge,
- Standard operational temperature: -40 to +65°C,
- Regulation of blade angle during standstill (in the range from 4 to 28°)

Fan impellers' tags: WO 7920-6-(7)

where:

7920 - nominal diameter in mm or ft

6 - number of blades

(7) - blade profile

Special execution:

HT - adapted for working in high temperatures: up to +120°C,

KO - acid and alkali resistant,

R - reinforced execution,

SE - stainless steel protection edges for rotational speed greater than 62 m/s (or on demand)

SS - elements of impeller's hub made of SS304 or SS316 stainless steel,

SG - self-extinguishing execution,

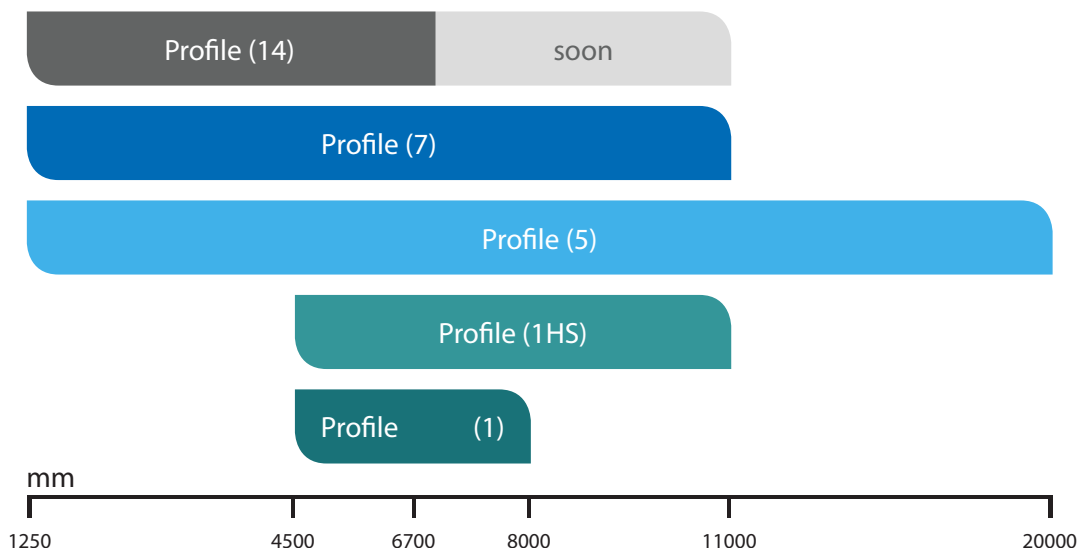
AS/SG - antistatic and self-extinguishing execution for impellers operating in ATEX zone 

For impellers we provide certificate of conformity according to ATEX standard for operating in zone II 2G, T1 - T6.

In case of special execution above mentioned tags are visible at the end of the impeller's name.

For example: **WO 5940-6-(7) AS/SG/SE**

Available range of diameters:



The most important parts of axial fan are its **blades**

Correct selection of the number of blades and their profile guarantees operational parameters meeting clients expectations.



Profile (1)

Narrow blade for operation with high rotational speed.
Used in projects where the key factor is a low price.

Available diameters: 4500 - 8000 mm (14 - 26 ft)

Number of blades in impeller: 3 to 8 pcs

Maximum tip peripheral speed: 75 m/s

Profile (1HS)

Specially designed blade securing stable operation of impeller in difficult conditions of concrete and steel fan stacks.

High dynamic loads resistance.

Available diameters: 4500 - 11000 mm (14 - 36 ft)

Number of blades in impeller: 3 to 8 pcs

Maximum tip peripheral speed: 80 m/s



Profile (5)

Blade's shape is slightly twisted. Therefore, it's possible to reach higher airflow parameters of fan and especially higher pressure increment in comparison with the blade profile (1HS).

Available diameters: 1250 - 20000 mm (4 - 66 ft)

Number of blades in impeller: 3 to 8 pcs

Maximum tip peripheral speed: 75 m/s



Profile (7)

High efficient, silent blade with a twisted shape which allows to reach high airflow parameters of fan being silent at the same time.

Available diameters: 1250 - 11000 mm (4 - 36 ft)

Number of blades in impeller: 3 to 8 pcs

Maximum tip peripheral speed: 62,5 m/s



Profile (14)

High efficient, ultra silent blade designed for operation with low rotational speed.

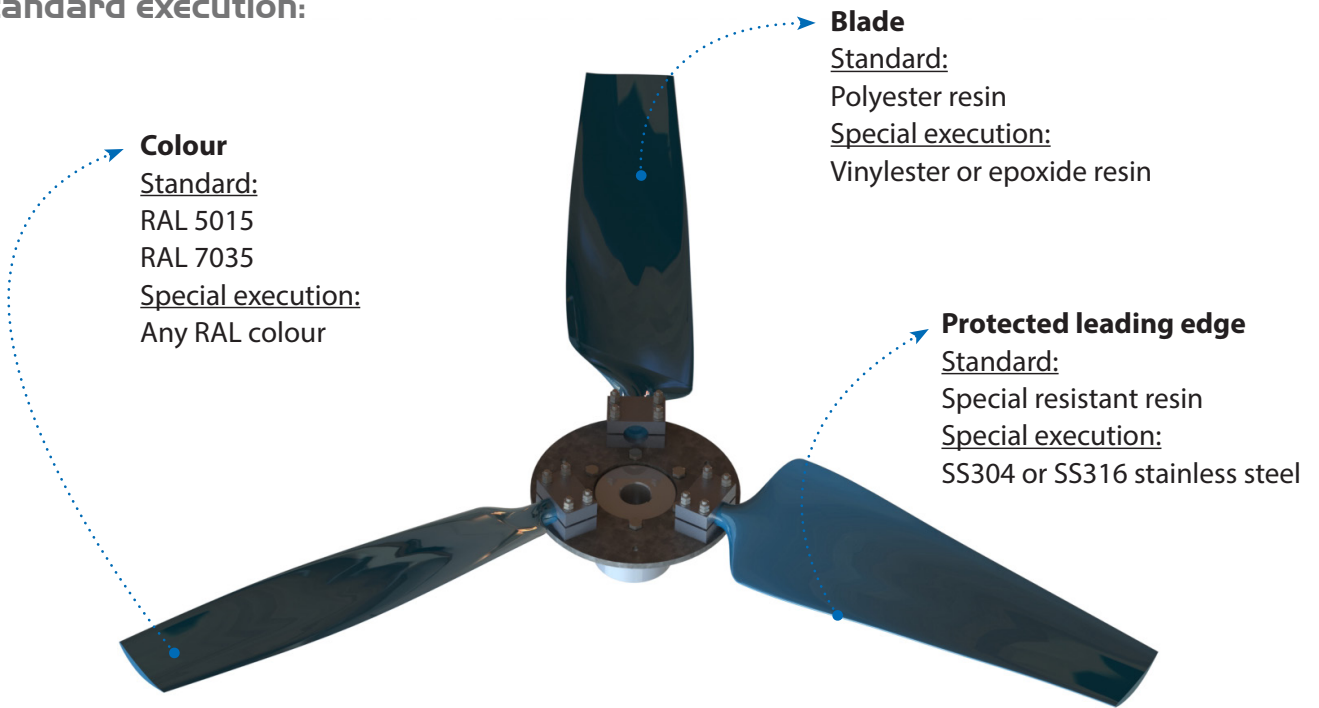
Spatial shape allows to reach high airflow parameters. Currently, it's the only blade on the market that is compatible with the most strict low noise requirements.

Available diameters: 1250 - 6700 mm (4 - 22 ft)

Number of blades in impeller: 3 to 6 pcs

Maximum tip peripheral speed: 53 m/s

Standard execution:



Colour
Standard:
RAL 5015
RAL 7035
Special execution:
Any RAL colour

Blade
Standard:
Polyester resin
Special execution:
Vinylester or epoxide resin

Protected leading edge
Standard:
Special resistant resin
Special execution:
SS304 or SS316 stainless steel

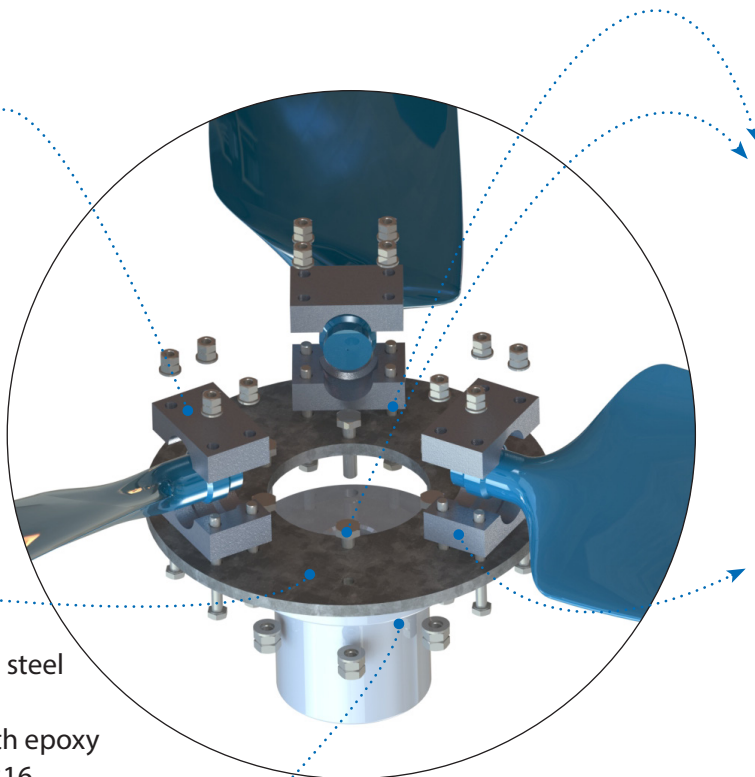
Clamping rings
Standard:
Hot dip galvanized steel
Special execution:
SS304 or SS316 stainless steel

Fasteners
Standard:
Hot dip galvanized steel
Special execution:
SS304 or SS316 stainless steel

Hub disc
Standard:
Hot dip galvanized steel
Special execution:
Steel protected with epoxy paint, SS304 or SS316 stainless steel

Blade support
Standard:
Aluminium
Special execution:
Galvanized steel, cast iron, SS304 or SS316 stainless steel

Coupling
Standard: Cast iron, aluminium or steel protected with epoxy paint
Special execution: SS304 or SS316 stainless steel



To complete our range of fan impellers Almeco also offers fan casings, which consist of fan stacks and fan rings.

Fan stacks

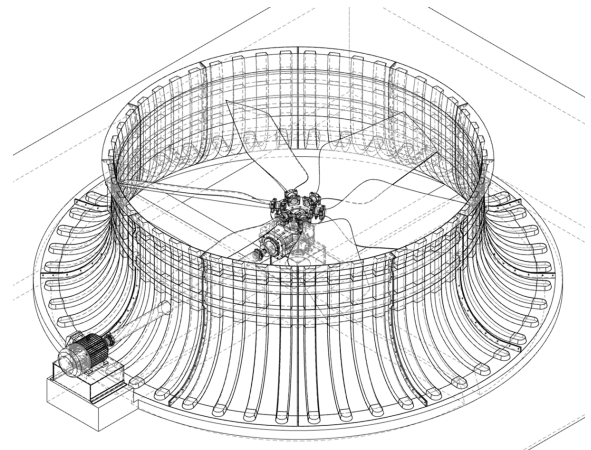
Fan stacks are used to optimally form the flow of the cooling air through the fan in order to achieve optimum airflow parameters and to secure the highest possible efficiency of the system.

Basic parameters

- Fibreglass reinforced polyester execution
- Double-coat design, internal and external surfaces are smooth, protected with UV-resistant gelcoat
- Special ribs secure high stiffness and protect from vibrations
- High execution standard facilitates central alignment of the impeller and setting of the optimum blade tip clearance
- Segmented design - easy transport and quick assembly on ground level or cooling tower's deck
- Low weight - in comparison to steel fan stacks
- Fasteners made of SS304 stainless steel
- Standard operational temperature: from -40 to +65°C
- Standard colour: RAL 7035 or RAL 5015
Any RAL colour available on demand

Optional equipment

- Access door
- Porthole
- Repair and touch-up kit
- Stainless steel fasteners SS316
- Lifting eyes

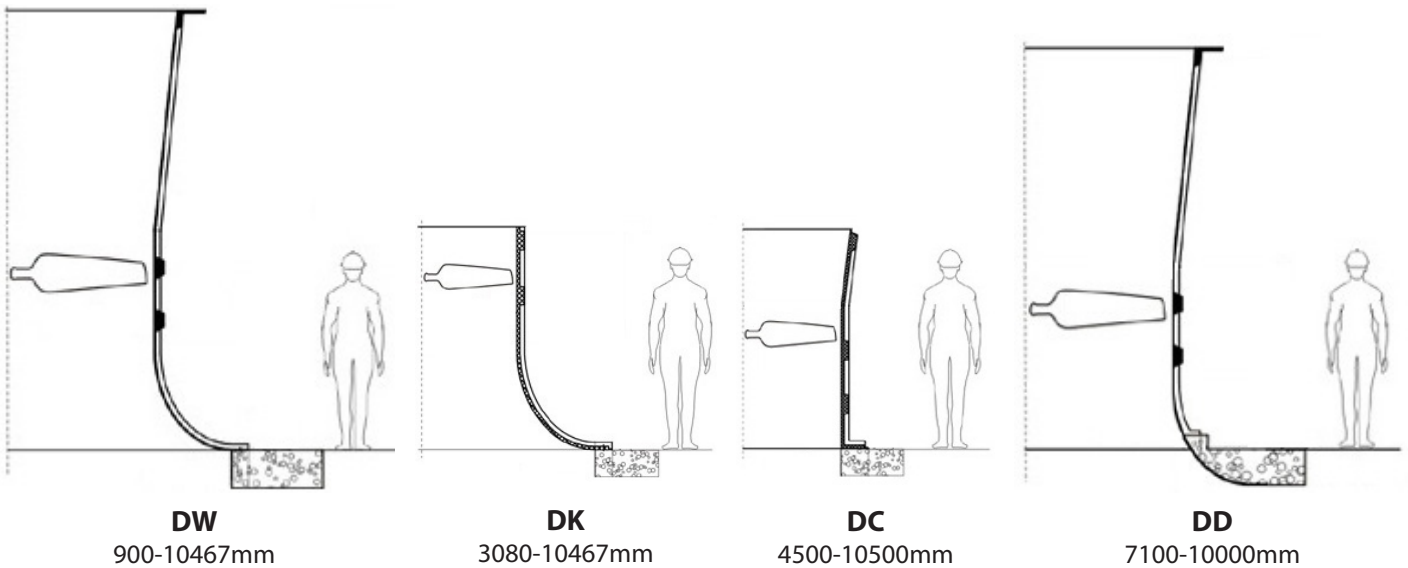


Special execution

- **HT** - adapted for working in high temperatures: up to +120°C
 - **KO** - acid and alkali resistant
 - **SG** - self-extinguishing execution
 - **AS/SG** - antistatic and self-extinguishing
- We provide certificate of conformity according to ATEX standard for operating in zone II 2G, T1 - T6.



Available diameters:



Fan rings

Fan rings have the same parameters as fan stacks, but are designed for operation in forced draft systems. Basically, they can be delivered with a protection grid attached to the inlet flange.



Available diameters: 1400-10401mm
Special execution: same as fan stack

Design, shape and geometrical dimensions of new fan casings are optimized during the design stage in order to secure the highest endurance parameters. The influence of impeller blades on the fan ring's wall is analyzed. On that basis, appropriate technology is developed to avoid vibrations during the operation of the fan.

Maintenance and repair

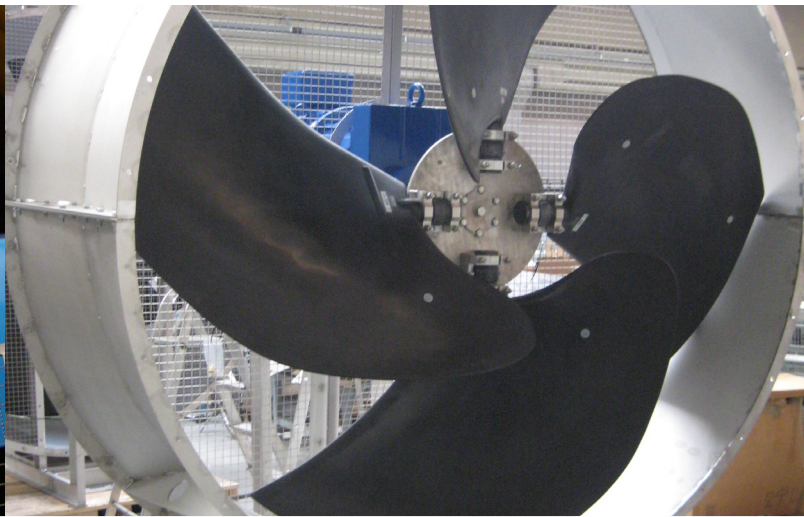
Almecco proposes maintenance services on fan impellers such as balancing and vibration analysis. We also have the possibility to repair polyester parts such as fan blades. Do not hesitate to contact us for more information.





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ALMECO nv Air and water technologies
Royennestraat 51, Rue de la Royenne
B-7700 Moeskroen-Mouscron
info@almeco.eu - www.almeco.eu