

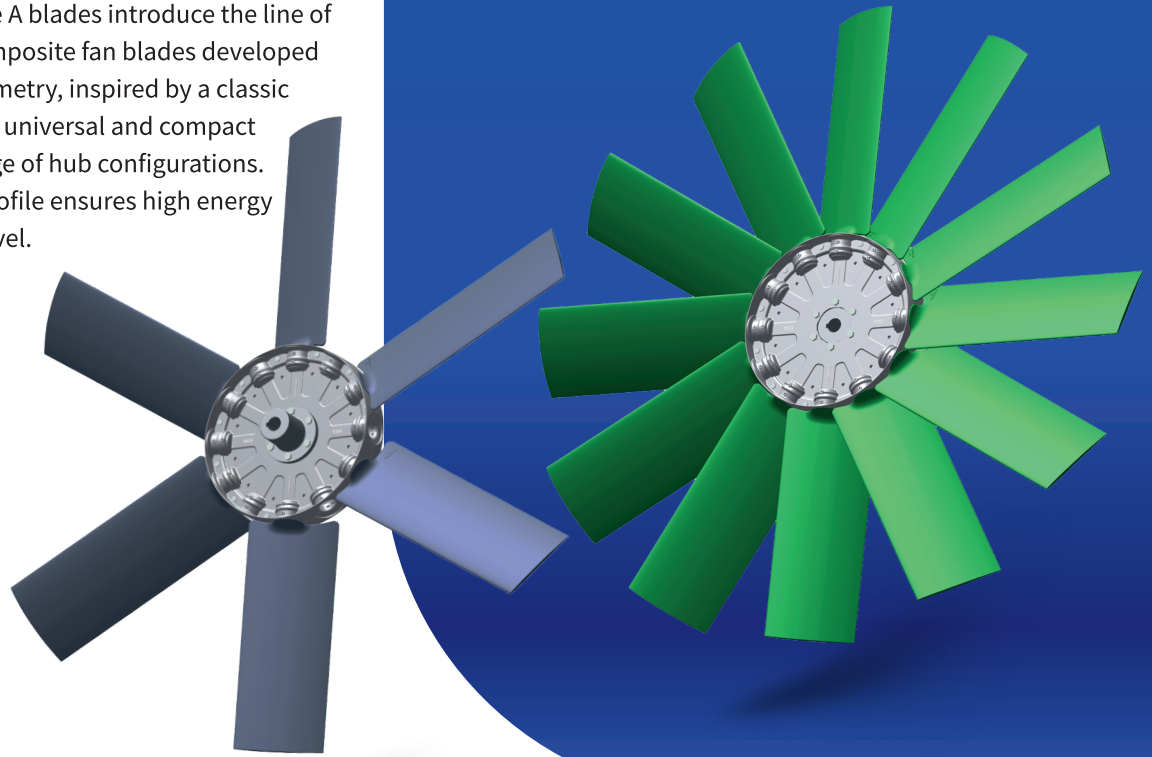
# Axial Fan Impellers

Impeller diameter range:  
Ø630–1508mm / Ø24.8–59.22in

**Axial fan** impellers with type A blades introduce the line of impellers equipped with composite fan blades developed by Planetfan. The blade geometry, inspired by a classic shape, enables the design of universal and compact impellers across the full range of hub configurations. The applied aerodynamic profile ensures high energy efficiency and a low noise level.

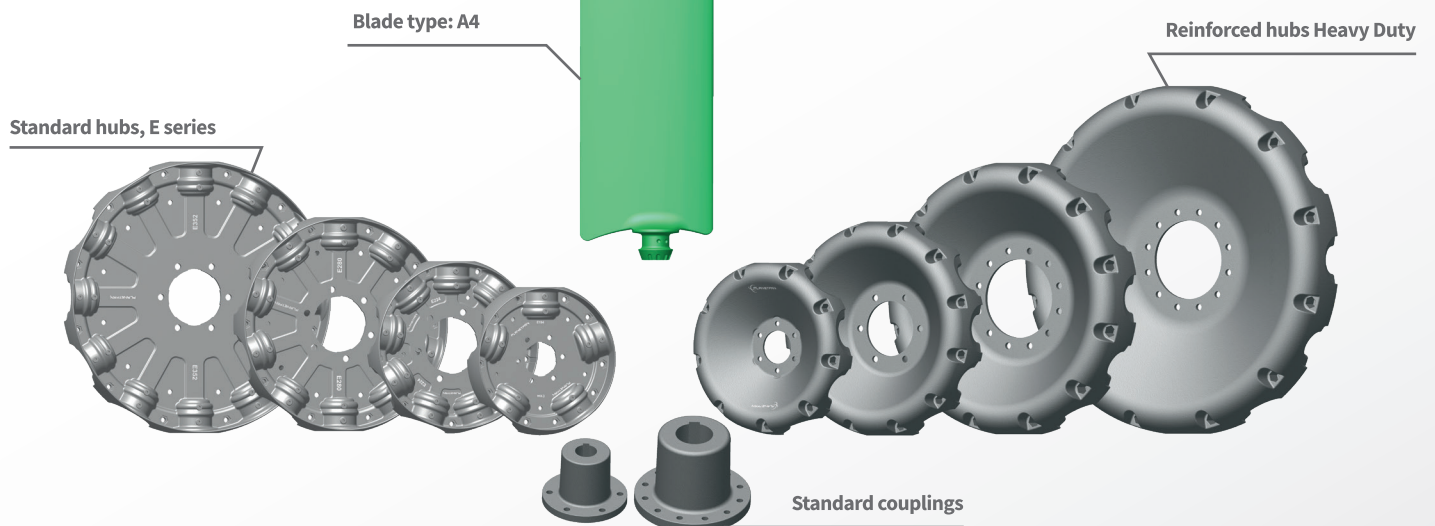
The mechanical design of the hubs and impeller blades has been carefully engineered to account for operational loads and stresses, ensuring high durability, reliable performance, and a long service life even under demanding operating conditions.

# PLANETFAN



**Axial fan impellers are available with blades in a single size A4 and in eight hub variants.**

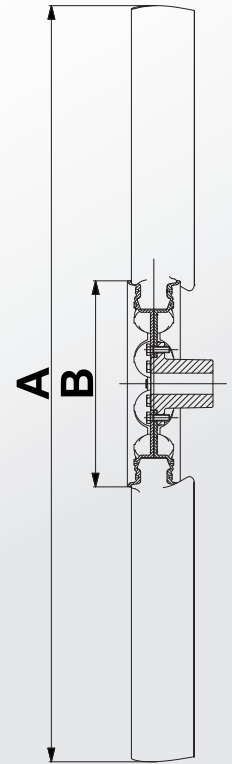
The designation **A4** defines both the blade type and size, where **A** indicates the blade type and **4** its size.



Hubs are available in a standard industrial version (E series) as well as a reinforced (Heavy duty) versions. The standard design offers an optimal strength-to-weight ratio, while the Heavy Duty variant is engineered for operation under increased loads and in harsh environmental conditions.

## Impeller dimensions

Blade type	Hub type		Hub diameter <b>B</b>		Maximum number of blades	Maximum impeller diameter <b>A</b>	
	Serie E	Serie HD	[mm]	[in]		[pcs]	[mm]
<b>A4</b>	E194/5	—	<b>194</b>	<b>7.63</b>	5	<b>1254</b>	<b>49.37</b>
	E224/9	224/9	<b>224</b>	<b>8.81</b>	9	<b>1284</b>	<b>50.55</b>
	E280/10	280/12	<b>280</b>	<b>11.02</b>	10/12	<b>1340</b>	<b>52.75</b>
	E352/12	352/12	<b>352</b>	<b>13.85</b>	12	<b>1412</b>	<b>55.59</b>
	—	448/12	<b>448</b>	<b>17.63</b>	12	<b>1508</b>	<b>59.37</b>



## Materials

Impeller hubs are standardly manufactured from an industrial-grade aluminium alloy produced by pressure die casting. Impeller blades are available in the following versions:

- **PPG – glass-fiber reinforced polypropylene** → Operating temperature range: from -10°C to +90°C
- **PAG – glass-fiber reinforced polyamide** → Operating temperature range: from -40°C to +120°C
- **PAGEX – glass-fiber reinforced polyamide with properties suitable for ATEX applications** → Operating temperature range: from -40°C to +120°C

## Example impeller code

**WO1250(E352)/12-6/A4/L/24/PAG/28H7/82/8/SW**

1	2	3	4	5	6	7	8	9	10	11	12
1	Axial impeller	7	Blade pitch angle								
2	Impeller diameter [mm]	8	Blade material								
3	Hub type	9	Shaft hole diameter								
4	Number of slots and blades	10	Coupling length								
5	Blade type	11	Shaft key width								
6	Direction of rotation: L > left, R > right	12	Flow direction								

## Applications

Axial fan impellers with type A blades are highly versatile and are used in a wide range of applications, including:

<b>Cooling and heat exchange:</b>	Cooling towers   Dry coolers
<b>Ventilation and fan technology:</b>	Axial fans   Drying systems
<b>Machinery and working vehicles:</b>	Hovercraft   Construction vehicles   Mining machinery and equipment
<b>Agriculture:</b>	Sprayers   Ventilation and drying of agricultural products   Livestock ventilation

## General

Planetfan impellers are the result of advanced engineering development combined with many years of research and prototype testing conducted in aerodynamic test tunnels. The comprehensively aerodynamically optimized design delivers exceptionally high static efficiency, placing Planetfan products among the world's leading and most efficient industrial axial fan impellers available on the market.

## Key features of the impellers:

- Number of blades  
**3 | 4 | 5 | 6 | 9 | 10 | 12**
- Variable blade pitch, adjustment **at standstill**
- Standard pitch adjustment increment **2°**
- Blade pitch angle range **10° – 32°**
- Maximum blade tip speed **160 m/s (525 ft/s)**
- Operating temperature range **from -40°C to +120°C (from -40°F to +248°F)**

**IMPELLER ROTATION DIRECTION: LEFT-HAND BLADES**

**HIGH IMPELLER EFFICIENCY**  
**RESULTS IN LOWER ELECTRICAL ENERGY CONSUMPTION**  
**OR REDUCED FUEL CONSUMPTION**  
**WHEN USED IN CONSTRUCTION VEHICLES.**