

Item	Quant.	Description	Unit price €	Total price €
01		<p>General Requirements The jet fans should be manufactured in a simple and sturdy manner. To avoid corrosion the jet fans and the mounting structure should be manufactured in stainless steel 1.4571 (V4A). The fans should be exchangeable.</p> <p>Under normal duties the jet fan has to be designed to run at temperatures between -20 and $+40^{\circ}\text{C}$. In the event of a fire, the jet fan has to withstand a temperature of up to 250°C for 90 minutes. In order to prove this, for the relevant parts like the impeller, motor, terminal box and terminals a heat test of a complete unit has to be conducted. The test must be certified by an independent laboratory. Testing of single parts e.g. impeller blades is not valid or sufficient. If the manufacturer can not provide a suitable certificate, then the costs for a heat test must be included in the quoted price.</p> <p>Casing The casing and the motor support should be manufactured from heavy construction 6mm stainless steel. To avoid corrosion in cracks the flanges have to be formed at the fan casing (no welded construction). Welds must be continuous. The external terminal box in stainless steel 1.4571 is heavy duty and corrosion resistant in IP65.</p> <p>Impeller The impeller is made of corrosion-resistant, cast aluminium. The nucleus of the hub is made from stainless steel 1.4571. The impeller is directly mounted onto the motor shaft. Strong steel bolts have to be cast in the aluminium blade to ensure the necessary stability in case of fire. To ensure a high efficiency the blades should be profiled. The blade angle is adjustable at standstill. The impeller has to be carefully statically and dynamically balanced (min. G6.3).</p> <p>Silencers Due to corrosion protection, all components of the silencers are manufactured in stainless steel 1.4571. At the inlet side, an aerodynamically shaped cone has to be provided. The outlet side is equipped with a defined separation edge for maximum thrust. All welds are continuous. Corrosion in cracks must be avoided. The isolation material is non-flammable mineral wool, which is fitted between the outer casing and the perforated</p>		

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Project Component **Unidirectional Jet Fan**

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		<p>sheet. The dimensioning of the silencers should be done according to specified sound pressure level. For silencer lengths above 1,5D measures to prevent swing must be implemented.</p> <p>Motor For jet fans, three-phase, fully enclosed, squirrel cage motors according to IEC standards in IP 55 should be used. To reach a well balanced cooling and air stream, the motor design is IMB5 or IMB14. The motor support with integrated guide vanes is welded on the fan casing. The electrical start will be direct on line in voltage operation 400V +/- 5%.</p> <p>The isolation class is H. The motors are suitable to withstand 250°C for 90 minutes. A certificate from the motor manufacturer is required.</p> <p>The bearings are lubricated for life. The bearing life time is min. 40000 hours. The halogen free and flame resistant power cables are connected to the external terminal box.</p> <p>Performance unidirectional Jet Fan</p> <table> <tr><td>Thrust</td><td>N</td></tr> <tr><td>Air density</td><td>kg/m³</td></tr> <tr><td>Volume flow</td><td>m³/s</td></tr> <tr><td>Outlet velocity</td><td>m/s</td></tr> <tr><td>Speed</td><td>min⁻¹</td></tr> <tr><td>Max. el. power consumption</td><td>kW</td></tr> <tr><td>Sound pressure 45° 3m free field</td><td>dB(A)</td></tr> </table> <p>Dimensions</p> <table> <tr><td>max. outer diameter</td><td>mm</td></tr> <tr><td>Size</td><td>mm</td></tr> </table> <p>Materials</p> <table> <tr><td>Fan casing</td><td>1.4571</td></tr> <tr><td>Impeller seawater resistant</td><td>cast aluminium</td></tr> <tr><td>Connection Blade/hub</td><td>steel bolt</td></tr> <tr><td>Silencer casing</td><td>1.4571</td></tr> <tr><td>Perforated sheet</td><td>1.4571</td></tr> </table>	Thrust	N	Air density	kg/m ³	Volume flow	m ³ /s	Outlet velocity	m/s	Speed	min ⁻¹	Max. el. power consumption	kW	Sound pressure 45° 3m free field	dB(A)	max. outer diameter	mm	Size	mm	Fan casing	1.4571	Impeller seawater resistant	cast aluminium	Connection Blade/hub	steel bolt	Silencer casing	1.4571	Perforated sheet	1.4571		
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DIN ISO 9001 certified



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WITT & SOHN
IGW Ventilatoren

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		Options <ul style="list-style-type: none">○ Thermistor protection (3 PTC)○ Thermistor protection (3 Pt100)○ Monitoring of the bearing temperatures (PTC)○ Monitoring of the bearing temperatures (Pt100)○ Space heater○ Certified calculation note for mounting structure including calculation for case of fire○ Anchor bolts in 1.4401○ Anchor bolts in 1.4529○ Halfenscrew in 1.4401○ Halfenscrew in 1.4529○ Vibration control at fan casing○ Service switch in IP65○ Temperature sensor○ Outlet guide vanes○ Protection grills○ Banana-Jet-Design		

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