

TAT LDSF Series Steel Square High-Pressure Exhaust Fan

Technical Submittal & Specification Sheet — High Pressure Wall Ventilating Fans (600 to 4,770 CFM)

Product Overview: The TAT LDSF series (LD-SF082 to LD-SF202) is a commercial and industrial steel square high-pressure ventilating fan. Engineered with a deep-drawn aerodynamic bellmouth casing, precision-formed steel impeller, and heavy-duty 4-pole motor, the LDSF series develops high static pressure (8 to 25 mmAq / 78.5 to 245.2 Pa) to maintain stable airflow through external shutters, rain louvers, and short ducted connections.

Key Construction & Technical Features:

- **Aerodynamic Bellmouth:** Smooth contoured bellmouth reduces inlet vortex turbulence and noise.
 - **Heavy Steel Construction:** Powder-coated steel casing and blades resist harsh industrial environments.
 - **Saudi 60 Hz Supply:** Standard 220–240V 60Hz 1-phase ratings with unbundled performance data below.
- **High Static Pressure:** 8 to 25 mmAq pressure capability prevents airflow collapse against resistance.
 - **Continuous Duty Motor:** High-durability motor rated for continuous operation from -10°C to +55°C.
 - **Rear Safety Grille:** Integrated concentric wire finger guard protects personnel and internal parts.

TAT LDSF Unbundled 50Hz & 60Hz Performance Table (220–240V 1-Phase 4-Pole):

Model	Blade Dia.	Freq.	Input	Current	Speed	Airflow (m³/h / CFM)	Max Pressure	Weight
LD-SF082	8" (200mm)	50 Hz	24 W	0.11 A	1350 RPM	1,000 m³/h (589 CFM)	8 mmAq (78.5 Pa)	2.2 kg
LD-SF082	8" (200mm)	60 Hz	25 W	0.11 A	1600 RPM	1,020 m³/h (600 CFM)	8 mmAq (78.5 Pa)	2.2 kg
LD-SF102	10" (250mm)	50 Hz	30 W	0.12 A	1350 RPM	1,300 m³/h (765 CFM)	10 mmAq (98.1 Pa)	2.8 kg
LD-SF102	10" (250mm)	60 Hz	35 W	0.13 A	1550 RPM	1,500 m³/h (883 CFM)	10 mmAq (98.1 Pa)	2.8 kg
LD-SF122	12" (300mm)	50 Hz	50 W	0.24 A	1350 RPM	1,800 m³/h (1,059 CFM)	13 mmAq (127.5 Pa)	3.3 kg
LD-SF122	12" (300mm)	60 Hz	60 W	0.27 A	1500 RPM	2,100 m³/h (1,236 CFM)	13 mmAq (127.5 Pa)	3.3 kg
LD-SF142	14" (350mm)	50 Hz	110 W	0.52 A	1250 RPM	3,300 m³/h (1,942 CFM)	15 mmAq (147.1 Pa)	4.5 kg
LD-SF142	14" (350mm)	60 Hz	120 W	0.55 A	1360 RPM	3,600 m³/h (2,119 CFM)	15 mmAq (147.1 Pa)	4.5 kg
LD-SF162	16" (400mm)	50 Hz	115 W	0.53 A	1260 RPM	4,200 m³/h (2,472 CFM)	18 mmAq (176.5 Pa)	6.0 kg
LD-SF162	16" (400mm)	60 Hz	140 W	0.65 A	1400 RPM	4,500 m³/h (2,648 CFM)	18 mmAq (176.5 Pa)	6.0 kg
LD-SF182	18" (450mm)	50 Hz	350 W	1.80 A	1500 RPM	7,200 m³/h (4,238 CFM)	22 mmAq (215.7 Pa)	17.0 kg
LD-SF182	18" (450mm)	60 Hz	400 W	2.00 A	1650 RPM	7,500 m³/h (4,414 CFM)	22 mmAq (215.7 Pa)	17.0 kg
LD-SF202	20" (500mm)	50 Hz	450 W	2.20 A	1450 RPM	7,800 m³/h (4,591 CFM)	25 mmAq (245.2 Pa)	18.0 kg
LD-SF202	20" (500mm)	60 Hz	500 W	2.50 A	1600 RPM	8,100 m³/h (4,767 CFM)	25 mmAq (245.2 Pa)	18.0 kg

Engineering Frequency Note: Saudi Arabia standard electrical networks operate at 220–240V 60Hz 1-Phase. Operating at 60Hz increases nominal motor rotational speed by ~10–18% and provides higher CFM throughput at rated static pressure compared to 50Hz baseline ratings.

Wall Cutout Framing & Physical Dimensions:

Model	Blade Dia.	Wall Opening (A×B)	Outer Frame (C×D)	Mounting Centers (E)	Depth (F)	Weight
LD-SF082	8" (200 mm)	260 × 260 mm	300 × 300 mm	270 × 270 mm	145 mm	2.2 kg
LD-SF102	10" (250 mm)	300 × 300 mm	350 × 350 mm	320 × 320 mm	165 mm	2.8 kg
LD-SF122	12" (300 mm)	360 × 360 mm	400 × 400 mm	370 × 370 mm	185 mm	3.3 kg
LD-SF142	14" (350 mm)	360 × 360 mm	400 × 400 mm	370 × 370 mm	185 mm	4.5 kg
LD-SF162	16" (400 mm)	465 × 465 mm	500 × 500 mm	470 × 470 mm	175 mm	6.0 kg
LD-SF182	18" (450 mm)	575 × 575 mm	620 × 620 mm	560 × 560 mm	245 mm	17.0 kg
LD-SF202	20" (500 mm)	575 × 575 mm	620 × 620 mm	560 × 560 mm	245 mm	18.0 kg

LDSF Shutter Accessories & Application Boundaries:

- **LDSF Automatic Shutter:** Square-matched automatic gravity shutter louvers open with exhaust discharge and close when de-energized to reduce outdoor dust and rain entry.
 - **Commercial Kitchen Boundary:** Suitable for restaurant dining areas, washing bays, and general prep room ventilation. **NOT** certified for commercial grease cooking hoods.
- **High Static Pressure Advantage:** 8 to 25 mmAq pressure capability easily overcomes shutter resistance (10–20 Pa) without significant CFM drops.
 - **Environmental Operating Range:** Rated for ambient air temperatures from -10°C to +55°C. For explosive vapors or flammable solvents, select ATEX certified equipment.

Routine Maintenance & Inspection Schedule:

Quarterly Preventive Maintenance: Disconnect electrical power before servicing. Wipe accumulated dust, lint, and atmospheric particles from the bellmouth frame, steel blades, and rear guard. Inspect motor bearings for smooth rotation and verify all wall mounting flange anchors are secure.

CLOUD ELECTRICALS CO. — TECHNICAL SALES & PROJECT PROCUREMENT
Riyadh, Kingdom of Saudi Arabia | CR: 1010614140 | VAT: 311207325200003
Phone / WhatsApp: +966 58 259 8137 | Email: sales@cloudventsa.com | Web: www.cloudventsa.com
Disclaimer: TAT LDSF series fans are high-pressure wall exhaust units. Confirm model number, operating voltage/frequency (220–240V 60Hz), wall opening framing, and required airflow at design static pressure prior to purchase.