

QUBE SQUHT

Centrifugal Box Fan

QUBE SQUHT

Product Overview

- 6 physical sizes from 315mm to 710mm
- Air volume flow rates of up to 3.9 m³/s
- Static pressures up to 1120 Pa
- Suitable for operating temperatures up to +120°C (in-duct)
- Inverter speed controllable via 1Ph and 3Ph supply
- Interchangeable double skinned panels
- Available in **AC**

A multi-discharge, double skinned fan unit incorporating a high performance backward curved impeller. The motor is situated out of the airstream making the range suitable for more arduous and elevated temperature applications. Units are supplied as either an end inlet discharge unit (Qube SQUHT) or as a side inlet discharge unit (Qube SQUHTS)*.

High Temperature

Motors are out of the air stream and are not effected by contaminants in the ventilated air. The range is suitable for a wide range of applications from contaminated air to elevated temperatures up to 120°C.

Intelligent Design

Movable panels allow the inlet and outlet position to be altered on site to suit installation. DW172 models for kitchens meet system velocity requirements.

Low Noise

Units are constructed from double insulated panels filled with 25mm fibre glass acoustic insulation giving reduced noise levels.

Easy Maintenance

An easily removable motor/impeller assembly arrangement is ideal for frequent cleaning or maintenance.

Controllability

The Eltadrive range of inverters has been designed encompassing the latest technology and combining robustness with reliability. Using an inverter to control

fans via sensors to reduce fan speed can provide significant cost-savings through lower energy consumption.

Warranty

Each SQUHT has a 12 month warranty.

Construction

Constructed from self supporting corrosion-resistant extruded Aluminium section. Assembled with aluminium corners and 25mm thick double skinned removable panels, manufactured from pre-galvanised steel and in-filled with a non flammable mineral wool, 60kg/m³.

Motor

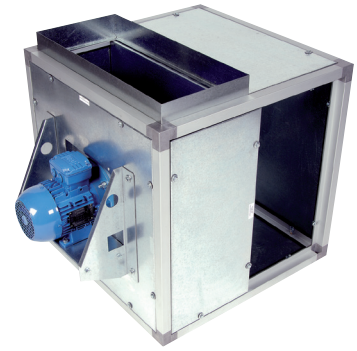
Three phase multi-voltage IP55 TEFC foot/flange mounted IEC frame motors, wound for either (Delta) 230V/3Ph/50Hz or (Star) at 400V/3Ph/50Hz connection, suitable for speed control when used with the Eltadrive VSD range of frequency inverter controls.

Impeller

A free running impeller with 7 backwards-curved blades made of sheet steel with surface protection provided by powder coating. The rotating, non-fluted diffuser generates high efficiency levels and favourable acoustic characteristics.

Typical Applications

- Kitchens
- Restaurants
- Schools
- Colleges
- Shops
- Shower Rooms
- Factories



Contents

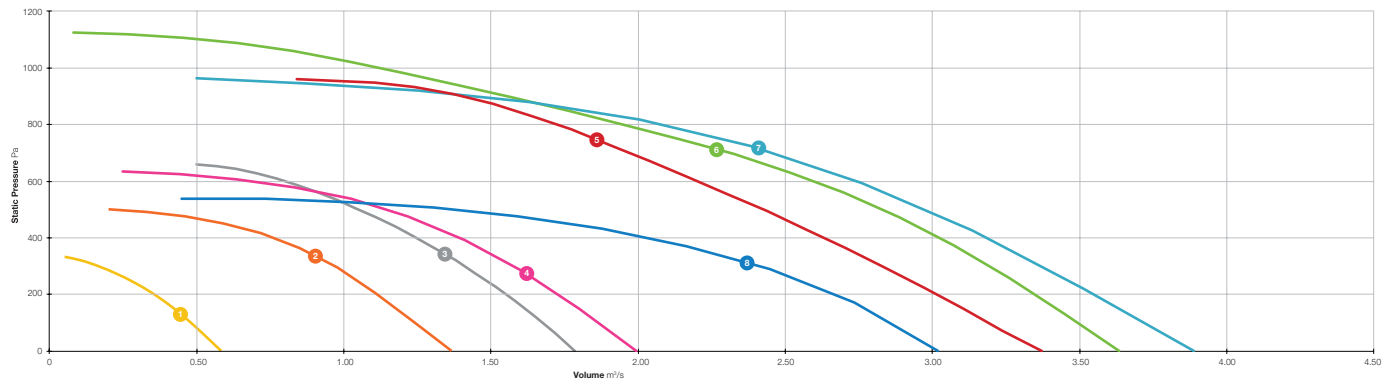
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* Add 'S' to product code for side entry.

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Performance Range Curves



- 1 SQU1 / 4-3HT
- 2 SQU2 / 4-3HT
- 3 SQU22 / 4-3HT
- 4 SQU3 / 4-3HT
- 5 SQU23 / 4-3HT
- 6 SQU24 / 4-3HT
- 7 SQU4 / 4-3HT
- 8 SQU4 / 6-3HT

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Performance, SFP & Electrical Data

Three Phase 380V to 415V / 50Hz

Product Code	Speed r/min	Airflow SFP	Airflow m³/s @ Static Pressure Pa								At Best Efficiency Point		Electrical Data			dBA @ 3m		
			0	100	200	300	400	500	600	800	1000	Overall Eff %	Input kW	Peak Amps	FLC* Amps			FLC# Amps
SQU1/4-3HT	1441	m³/s	0.582	0.478	0.354	0.162	-	-	-	-	-	33.4	0.252	0.81	2.30	1.02	Inlet	51
		W/(L/s)	0.32	0.46	0.76	1.32	-	-	-	-	-						Outlet	53
																	Breakout	38
SQU2/4-3HT	1445	m³/s	1.367	1.241	1.115	0.968	0.764	-	-	-	-	54.2	0.542	1.42	5.30	2.05	Inlet	57
		W/(L/s)	0.31	0.45	0.63	0.87	1.14	-	-	-	-						Outlet	59
																	Breakout	44
SQU22/4-3HT	1470	m³/s	1.785	1.676	1.552	1.409	1.245	1.051	0.800	-	-	53.8	1.054	2.23	8.50	3.17	Inlet	60
		W/(L/s)	0.50	0.58	0.67	0.76	0.88	1.01	1.21	-	-						Outlet	62
																	Breakout	47
SQU3/4-3HT	1471	m³/s	1.993	1.866	1.729	1.576	1.393	1.147	0.691	-	-	60.1	1.077	2.40	8.50	3.17	Inlet	66
		W/(L/s)	0.38	0.48	0.59	0.74	0.91	1.11	1.44	-	-						Outlet	68
																	Breakout	47
SQU23/4-3HT	1445	m³/s	3.370	3.187	3.013	2.831	2.634	2.423	2.201	1.725	-	54.1	2.734	5.48	-	6.20	Inlet	66
		W/(L/s)	0.87	0.91	0.97	1.03	1.11	1.20	1.30	1.57	-						Outlet	68
																	Breakout	53
SQU24/4-3HT	1435	m³/s	3.635	3.493	3.348	3.195	3.027	2.833	2.600	1.951	1.126	58.6	2.894	5.50	7.60	2.80	Inlet	66
		W/(L/s)	0.54	0.63	0.72	0.81	0.90	1.00	1.11	1.44	2.05						Outlet	68
																	Breakout	48
SQU4/4-3HT	1447	m³/s	3.889	3.720	3.550	3.373	3.185	2.980	2.745	2.086	-	64.8	2.898	6.50	-	6.20	Inlet	66
		W/(L/s)	0.49	0.59	0.71	0.83	0.99	1.17	1.37	1.79	-						Outlet	68
																	Breakout	48
SQU4/6-3HT	910	m³/s	3.019	2.866	2.673	2.415	2.037	1.372	-	-	-	66.9	1.352	3.90	7.60	2.80	Inlet	59
		W/(L/s)	0.39	0.46	0.55	0.69	0.86	1.04	-	-	-						Outlet	61
																	Breakout	46

The unit is supplied as either an end inlet vertical discharge unit (SQU-HT) or as a side inlet vertical discharge unit (SQU-HTS).

* FLC Amps at 230V / 1Ph / 50Hz input before a 1Ph to 3Ph Variable Speed Drive.

FLC Amps at 400V / 3Ph / 50Hz input before a 3Ph to 3Ph Variable Speed Drive. Exempt from ErP of the European Parliament.

A variable speed drive (Eltadrive) must be installed with this fan.

Data provided is at standard air density of 1.2 kg/m³.

Peak Amps @ 400V / 3PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

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Sound Data

Three Phase 380V to 415V / 50Hz

Product Code	Speed r/min		Sound Power Level dBW @ Octave Band Hz							Total dB	
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz		8kHz
SQU1/4-3HT	1441	Inlet	62	66	70	70	66	62	57	53	75
		Outlet	64	68	72	72	68	64	59	55	77
		Breakout	63	65	63	57	52	44	37	28	69
SQU2/4-3HT	1445	Inlet	68	72	76	76	72	68	63	59	81
		Outlet	70	74	78	78	74	70	65	61	83
		Breakout	69	71	69	63	54	44	36	33	75
SQU22/4-3HT	1470	Inlet	72	76	80	79	76	71	67	62	85
		Outlet	74	78	82	81	78	73	69	64	87
		Breakout	73	75	73	66	59	52	43	38	79
SQU3/4-3HT	1471	Inlet	72	76	79	79	75	71	67	62	84
		Outlet	74	78	81	81	77	73	69	64	86
		Breakout	73	75	72	66	58	52	43	38	79
SQU23/4-3HT	1445	Inlet	78	82	86	85	81	77	73	68	91
		Outlet	80	84	88	87	83	79	75	70	93
		Breakout	79	81	79	72	62	53	42	36	85
SQU24/4-3HT	1435	Inlet	78	82	86	85	81	77	73	68	91
		Outlet	80	84	88	87	83	79	75	70	93
		Breakout	79	81	79	72	62	53	42	36	85
SQU4/4-3HT	1447	Inlet	78	82	86	85	81	77	73	68	91
		Outlet	80	84	88	87	83	79	75	70	93
		Breakout	77	76	73	68	59	52	41	33	81
SQU4/6-3HT	910	Inlet	73	76	79	78	74	70	65	61	84
		Outlet	75	78	81	80	76	72	67	63	86
		Breakout	74	75	72	65	56	49	42	31	79

Data provided at standard air density of 1.2 kg/m³.
 Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.
 The Sound Power Level Spectra are in dB re-1pW.

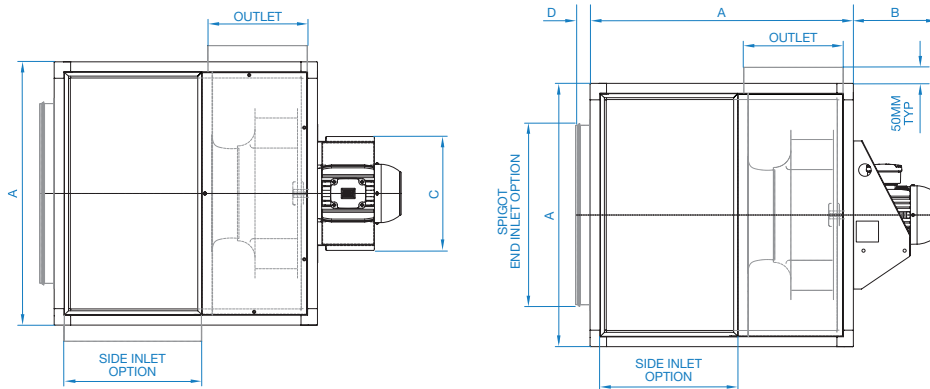
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Dimensional Data

Three Phase

Product Code*	A	B	C	D	SPIGOT Ø	Side Inlet	Outlet	Weight kg
SQU1/4-3HT	500	197	280	63	315	203 x 440	219 x 440	43
SQU2/4-3HT	670	213	350	80	500	320 x 610	273 x 610	70
SQU22/4-3HT	670	257	350	80	400	320 x 610	273 x 610	89
SQU3/4-3HT	820	257	350	80	560	420 x 740	303 x 740	114
SQU23/4-3HT	820	293	474	80	500	420 x 740	303 x 740	144
SQU24/4-3HT	1020	293	474	99	630	571 x 940	352 x 940	173
SQU4/4-3HT	1020	293	474	99	710	571 x 940	352 x 940	172
SQU4/6-3HT	1020	293	474	99	710	571 x 940	352 x 940	190



* Add 'S' to product code for side entry.
Dimensions are in mm.

Accessories

Three Phase

Product Code*	Eltadrive Variable Speed Drive 1PH-3PH IP66	Eltadrive Variable Speed Drive 1PH-3PH IP20	Eltadrive Variable Speed Drive 3PH-3PH IP66	Eltadrive Variable Speed Drive 3PH-3PH IP20	Flanged Silencer 1D Unpodded	Flanged Silencer 2D Unpodded
SQU1/4-3HT	149-ODE3-12037-1KB1Y	149-ODE3-12037-1KB12	149-ODE3-14075-3KA1Y	149-ODE3-14075-3KA12	068-0315-1DENP	068-0315-2DENP
SQU2/4-3HT	149-ODE3-12075-1KB1Y	149-ODE3-12075-1KB12	149-ODE3-14075-3KA1Y	149-ODE3-14075-3KA12	068-0500-1DENP	068-0500-2DENP
SQU22/4-3HT	149-ODE3-12151-1KB1Y	149-ODE3-12150-1KB12	149-ODE3-14150-3KA1Y	149-ODE3-14150-3KA12	068-0400-1DENP	068-0400-2DENP
SQU3/4-3HT	149-ODE3-12151-1KB1Y	149-ODE3-12150-1KB12	149-ODE3-14150-3KA1Y	149-ODE3-14150-3KA12	068-0560-1DENP	068-0560-2DENP
SQU23/4-3HT	-	-	149-ODE3-24400-3KA4Y	149-ODE3-24400-3KA42	068-0500-1DENP	068-0500-2DENP
SQU24/4-3HT	-	-	149-ODE3-24400-3KA4Y	149-ODE3-24400-3KA42	068-0630-1DENP	068-0630-2DENP
SQU4/4-3HT	-	-	149-ODE3-24400-3KA4Y	149-ODE3-24400-3KA42	068-0710-1DENP	068-0710-2DENP
SQU4/6-3HT	149-ODE3-22220-1KB4Y	149-ODE3-22220-1KB42	149-ODE3-24220-3KA4Y	149-ODE3-24220-3KA42	068-0710-1DENP	068-0710-2DENP

Product Code	High Temperature Flexible Connectors (each)	Matching Flanges (each)	TPI Transition Piece † (Inlet)	TPO Transition Piece (Outlet)	Vertical Weather Hood ‡	Wiring Diagram
SQU1/4-3HT*	063-0315-PU250	061B-0315	260-SQU-TPI-A	260-SQU-TPO-A	064-SQU-WHV-A	152-600
SQU2/4-3HT*	063-0500-PU250	061B-0500	260-SQU-TPI-B	260-SQU-TPO-B	064-SQU-WHV-B	152-600
SQU22/4-3HT*	063-0400-PU250	061B-0400	260-SQU-TPI-C	260-SQU-TPO-C	064-SQU-WHV-B	152-600
SQU3/4-3HT*	063-0560-PU250	061B-0560	260-SQU-TPI-D	260-SQU-TPO-D	064-SQU-WHV-C	152-600
SQU23/4-3HT*	063-0500-PU250	061B-0500	260-SQU-TPI-E	260-SQU-TPO-E	064-SQU-WHV-C	152-600
SQU24/4-3HT*	063-0630-PU250	061B-0630	260-SQU-TPI-F	260-SQU-TPO-F	064-SQU-WHV-D	152-600
SQU4/4-3HT*	063-0710-PU250	061B-0710	260-SQU-TPI-G	260-SQU-TPO-G	064-SQU-WHV-D	152-600
SQU4/6-3HT*	063-0710-PU250	061B-0710	260-SQU-TPI-G	260-SQU-TPO-G	064-SQU-WHV-D	152-600



Fan & inverter packages available.

Please contact Elta Fans for more information.

* Add 'S' to product code for side entry.

† HTS model only.

‡ For horizontal discharge only.

Building Services

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