ELTA SELECT

Qube SQU-HT(s)

Product Brochure

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Qube SQU-HT(s)

Centrifugal Box Fan

centrifugal

OVERVIEW

The QUBe SQU-HT is a multi-discharge, double skinned fan unit incorporating the high performance backward curved Ziehl-Abegg RH-C impeller designed specifically for operation without a scroll. With motor out of the airstream it is suitable for more arduous and elevated temperature applications. The unit is supplied as either an end inlet vertical discharge unit (QUBe-HT) or as a side inlet vertical discharge unit (QUBe-HTs)*.

*Please specify at the time of ordering.

QUICK FACTS

- ✓ 4 physical sizes with 8 models from 315mm to 710mm.
- ✓ Air volume flow rates up to 3.9 m³/s.
- ✓ Static pressures up to 1135 Pa.
- ✓ Suitable for operating temperatures up to +120°C.
- ✓ Interchangeable double skinned panels.
- ✓ Inverter speed controllable via 1Ph and 3Ph supply.
- ✓ Suitable for use in kitchen ventilations systems, complying with DW172, and 2013 Part L Building regulations for non domestic buildings.

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CASING

Constructed from self supporting corrosion-resistant extruded aluminium section. Straight through airflow as supplied. Discharge position can be altered on site.

The inlet and outlet panels incorporate circular spigots with integral U-shaped ozone and UV stable EPDM rubber seals to prevent duct leakage.

Assembled with aluminium corners, and 25mm thick double skinned removable panels, manufactured from pre-galvanised steel, in-filled with a non flammable mineral wool, 60kg/m³, thereby minimising breakout noise.

IMPELLER

A high efficiency backward curved welded steel impeller with a non-overloading power characteristic, finished with a powder coating to RAL 5002 for greater surface protection, and dynamically balanced to G2.5 / G6.3 according to ISO1940 part 1.

MOTORS

Three phase multi-voltage IP55 TEFC Foot / Flange mounted IEC frame motors, suitable for speed control when used with the Eltadrive VSD range of frequency inverter controls.

QUALITY MANAGEMENT

Units are to be designed and manufactured with procedures as defined in BS EN ISO 9001:2008. All SQU units are to be tested to ISO 5801:2007 (airside performance) and BS 848 Part 2:1985 (sound performance).

TYPICAL APPLICATIONS

- Kitchens
- Restaurants
- Schools
- Colleges
- Shops
- Sports Halls
- Shower Rooms
- Factories
- Industrial Units
- Warehousing

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Qube SQU-HT(s)

Performance, SFP & Electrical Data

AC

THREE Phase - 380V to 415V / 50Hz

Product Code	Speed r/min	Airflow SFP	Airflow m³/s @ Static Pressure Pa.										Overall Efficiency %	FMEG	Motor		Electrical Data		dBA @ 3m	
			0	100	200	300	400	500	600	800	1000	1200			kW	FLC Amps	FLC* Amps	FLC# Amps		
SQU1/4-3HT	1441	m³ / s	**0.582**	**0.478**	**0.354**	**0.162**							33.4	N50	0.25	0.805	2.3	1.02	Inlet	51
																			Outlet	53
		W / (L/s)	0.32	0.46	0.76	1.32													Breakout	38
SQU2/4-3HT	1445	m³ / s	**1.367**	**1.241**	**1.115**	**0.968**	**0.764**						54.2	N66	0.55	1.42	5.3	2.05	Inlet	57
																			Outlet	59
		W / (L/s)	0.31	0.45	0.63	0.87	1.14												Breakout	44
NEW MODEL SQU22/4-3HT	1472	m³ / s	**1.739**	**1.637**	**1.513**	**1.367**	**1.203**	**1.021**	**0.791**				60.1	N70	1.1	2.4	8.5	3.17	Inlet	60
																			Outlet	62
		W / (L/s)	0.53	0.60	0.69	0.79	0.91	1.04	1.23										Breakout	47
SQU3/4-3HT	1471	m³ / s	**1.993**	**1.866**	**1.729**	**1.576**	**1.393**	**1.147**	**0.691**				60.1	N70	1.1	2.4	8.5	3.17	Inlet	60
																			Outlet	62
		W / (L/s)	0.38	0.48	0.59	0.74	0.91	1.11	1.44										Breakout	47
NEW MODELS SQU23/4-3HT	1445	m³ / s	**3.253**	**3.094**	**2.930**	**2.761**	**2.583**	**2.393**	**2.184**	**1.669**	**0.640**		64.8	N70	3	6.5	-	6.2	Inlet	66
																			Outlet	68
		W / (L/s)	0.88	0.93	0.99	1.06	1.13	1.21	1.31	1.61	3.09								Breakout	48
SQU24/4-3HT	1438	m³ / s	**3.627**	**3.483**	**3.329**	**3.162**	**2.978**	**2.774**	**2.543**	**1.956**	**1.033**		66.9	N76	1.5	3.9	7.6	2.8	Inlet	59
																			Outlet	61
		W / (L/s)	0.56	0.64	0.73	0.82	0.92	1.02	1.14	1.45	2.12								Breakout	46
SQU4/4-3HT	1447	m³ / s	**3.889**	**3.720**	**3.550**	**3.373**	**3.185**	**2.980**	**2.745**	**2.086**			64.8	N70	3	6.5	-	6.2	Inlet	66
																			Outlet	68
		W / (L/s)	0.49	0.59	0.71	0.83	0.99	1.17	1.37	1.79									Breakout	48
SQU4/6-3HT	910	m³ / s	**3.019**	**2.866**	**2.673**	**2.415**	**2.037**	**1.372**					66.9	N76	1.5	3.9	7.6	2.8	Inlet	59
																			Outlet	61
		W / (L/s)	0.39	0.46	0.55	0.69	0.86	1.04											Breakout	46

Data provided at standard air density of 1.2 kg/m³.
Overall total efficiency, r/min and FMEG values are per ISO 12759 installation category D.
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.
A variable speed drive (Eltadrive) must be installed with this fan. Data shown is for end inlet configuration.
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

AC

THREE Phase - 380V to 415V / 50Hz

Product Code		Sound Power Level dBW @ Octave Band Hz								Total dB
		63Hz	125Hz	250Hz	500Hz	1 kHz	2 kHz	4 kHz	8 kHz	
SQU1/4-3HT	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	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	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	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	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	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	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	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

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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Accessories & Wiring Data

AC

For more information on Accessories & Wiring Diagrams, please see individual product downloads, or visit eltaselect.com/information-centre

THREE Phase - 380V to 415V / 50Hz

Product Code	Inverter Controller 1PH-3PH IP55	Inverter Controller 1PH-3PH IP20	Inverter Controller 3PH-3PH IP55	Inverter Controller 3PH-3PH IP20	Matching Flanges (each)	Flexible Connections (each)
SQU1/4-3HT*	149-ODE-2-12037-1KB1S	149-ODE-2-12037-1KB12	149-ODE-2-14075-3KA1S	149-ODE-2-14075-3KA12	061B-0315	063-0315-PU250
SQU2/4-3HT*	149-ODE-2-12075-1KB1S	149-ODE-2-12075-1KB12	149-ODE-2-14075-3KA1S	149-ODE-2-14075-3KA12	061B-0500	063-0500-PU250
SQU22/4-3HT	149-ODE-2-12151-1KB1S	149-ODE-2-12150-1KB12	149-ODE-2-14150-3KA1S	149-ODE-2-14150-3KA12	061B-0400	063-0400-PU250
SQU3/4-3HT*	149-ODE-2-12151-1KB1S	149-ODE-2-12150-1KB12	149-ODE-2-14150-3KA1S	149-ODE-2-14150-3KA12	061B-0560	063-0560-PU250
SQU23/4-3HT	-	-	149-ODE-2-24400-3KA4S	149-ODE-2-24400-3KA42	061B-0500	063-0500-PU250
SQU24/4-3HT	-	-	149-ODE-2-24400-3KA4S	149-ODE-2-24400-3KA42	061B-0630	063-0630-PU250
SQU4/4-3HT*	-	-	149-ODE-2-24400-3KA4S	149-ODE-2-24400-3KA42	061B-0710	063-0710-PU250
SQU4/6-3HT*	149-ODE-2-22220-1KB4S	149-ODE-2-22220-1KB42	149-ODE-2-24220-3KA4S	149-ODE-2-24220-3KA42	061B-0710	063-0710-PU250

Product Code	Inlet Transition Piece †	Outlet Transition Piece	Weather Hood	Silencer 1D Unpodded	Silencer 2D Unpodded	Wiring Diagram No.
SQU1/4-3HT*	260-SQU-TPI-A	260-SQU-TPO-A	064-SQU-WHV-A	068-0315-1DENP	068-0315-2DENP	152-600
SQU2/4-3HT*	260-SQU-TPI-B	260-SQU-TPO-B	064-SQU-WHV-B	068-0500-1DENP	068-0500-2DENP	152-600
SQU22/4-3HT	260-SQU-TPI-C	260-SQU-TPO-C	064-SQU-WHV-B	068-0400-1DENP	068-0400-2DENP	152-600
SQU3/4-3HT*	260-SQU-TPI-D	260-SQU-TPO-D	064-SQU-WHV-C	068-0560-1DENP	068-0560-2DENP	152-600
SQU23/4-3HT	260-SQU-TPI-E	260-SQU-TPO-E	064-SQU-WHV-C	068-0500-1DENP	068-0500-2DENP	152-600
SQU24/4-3HT	260-SQU-TPI-F	260-SQU-TPO-F	064-SQU-WHV-D	068-0630-1DENP	068-0630-2DENP	152-600
SQU4/4-3HT*	260-SQU-TPI-G	260-SQU-TPO-G	064-SQU-WHV-D	068-0710-1DENP	068-0710-2DENP	152-600
SQU4/6-3HT*	260-SQU-TPI-G	260-SQU-TPO-G	064-SQU-WHV-D	068-0710-1DENP	068-0710-2DENP	152-600

* Add 'S' to code for side entry
† HTs model only

Optimum Energy Efficiency Point

THREE Phase - 380V to 415V / 50Hz

Product Code	Volume m³/s	Pressure Pa	Input kW	Speed r/min	Efficiency %	FMEG
SQU1/4-3HT*	0.382	195	0.252	1441	33.4	N50
SQU2/4-3HT*	0.793	399	0.642	1445	54.2	N66
SQU22/4-3HT	0.970	561	1.043	1472	56.7	N66
SQU3/4-3HT*	1.210	493	1.077	1471	60.1	N70
SQU23/4-3HT	1.870	785	2.767	1445	56.1	N61
SQU24/4-3HT	2.182	761	2.902	1438	60.4	N65
SQU4/4-3HT*	2.395	743	2.898	1447	64.8	N70
SQU4/6-3HT*	1.904	440	1.352	910	66.9	N76

Data provided at standard air density of 1.2 kg/m³.
Values are per ISO 12759 installation category D (total).
A variable speed drive (Eltadrive) must be installed with this fan.
Data shown is for end inlet configuration.

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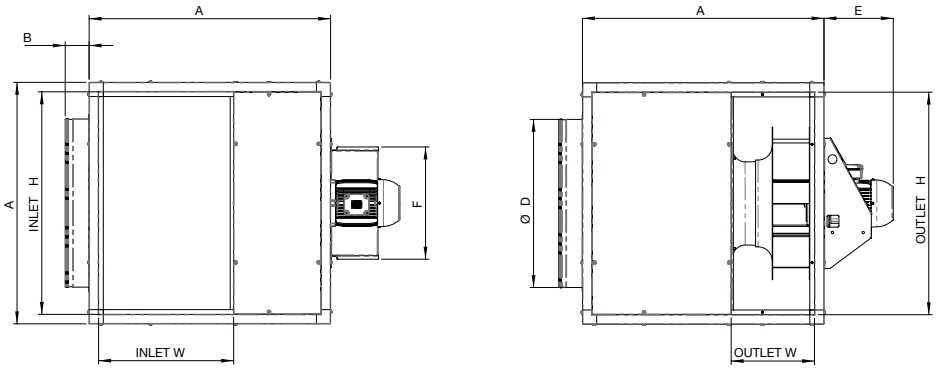
Dimensional Data



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

All dimensions are expressed in mm.

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