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ROOF UNITS - ROOFMASTER STOF SHUTTER

FEATURES

- 8 sizes
- Volume flows up to 4.7 m^3/s
- Static Pressures up to 950 Pa
- Both EC- and AC-versions available
- Low sound level
- High efficiency
- Speed controllable
- ErP 2015 compliant
- Bird Guard & Shutters included as standard

ELECTRICAL SUPPLY

230V/50Hz/1ϕ
400V/50Hz/3ϕ

TEMPERATURE RANGE

-20°C to +60°C (dependant on size)

SIZES

190, 225, 310, 355, 400, 450, 500 and 630 mm

MATERIAL AND DESIGN

The fan cowl is manufactured from cold pressed fibre glass and contains an ultra violet stabiliser, which ensures the cowls will not fade due to sunlight.

Standard colourant: BS 5252 10 A 5 (Goosewing grey).

The impeller is protected by the bird guard against foreign particles.

The fan discharges horizontally.

MOTOR AND IMPELLER

The impeller has backward curved blades and is manufactured from polyamide (plastic) and is located inside the airstream. The motor is of the external rotor type. 1 phase AC motors are equipped with thermal contact. See motor IP class in the motor table.

INSTALLATION

Fans can be mounted to a roof curb via either an installation frame or alternatively can be fitted directly to roof base. Fans are suitable for mounting on a flat or a pitched roof of up to 30 degrees.

SPEED CONTROL

Both AC and EC versions are available with speed control.

EC motors are equipped with integral speed control for use with auxiliary 0-10v controller.

AC motors can be controlled using a separate transformer speed control.

PRODUCT CODE - STOF-190-SAC-102-0

STOF-aaa-bbb-ccc-0

- aaa = impeller diameter, e.g. 190
- bbb V = vertical
  S = shutter
- bbb AC = AC-motor
  EC = EC-motor
- ccc 1 = 1-phase
  3 = 3-phase
- ccc 0 = non insulated
- ccc 2 = aluzinc
- 0 Generation

ACCESSORIES - **CONTROLLERS** (Pages 219-267)


DSM/DSC
Adapter plate


Controls
Potentiometer


Controls
Transformer


Isolator
Switch

PRODUCT & ELECTRICAL DETAILS - 50 HZ

EC STOF SHUTTER ROOF FAN

Part Number (EC)	Part Code	Motor nominal data at 50 Hz Supply voltage	Power kW	Max current A	Speed r/min	Speed fan r/min	Maximum Operating Temp°C	Isolator
STOF-190-SEC-102-0	ST193211	1x200...240VAC 50/60 Hz	0.083	0.75	3200	3070	60	EA002000
STOF-225-SEC-102-0	ST223211	1x200...240VAC 50/60 Hz	0.082	0.7	2200	2050	60	EA002000
STOF-310-SEC-102-0	**ST313411**	**1x200...240VAC 50/60 Hz**	**0.15**	**1.2**	**1525**	**1550**	**60**	**EA002000**
STOF-355-SEC-102-0	**ST353411**	**1x200...240VAC 50/60 Hz**	**0.168**	**1.4**	**1250**	**1190**	**60**	**EA002000**
STOF-400-SEC-102-0	**ST403411**	**1x200...277VAC 50/60 Hz**	**0.33**	**1.46**	**1270**	**1270**	**60**	**EA002000**
STOF-450-SEC-302-0	**ST453413**	**3x380...480VAC 50/60 Hz**	**0.97**	**1.7**	**1550**	**1560**	**60**	**EA002000**
STOF-500-SEC-302-0	**ST503413**	**3x380...480VAC 50/60 Hz**	**1.96**	**3**	**1560**	**1570**	**40**	**EA002000**
STOF-630-SEC-302-0	**ST633413**	**3x380...480VAC 50/60 Hz**	**2.75**	**4.3**	**1300**	**1310**	**55**	**EA002000**

Horizontal Shutter EC	IP class	Insulation	Motor protection	Speed Controller 0-10 V
STOF-190-SEC-102-0	54	B	Internal TOP	EA002107
STOF-225-SEC-102-0	54	B	Internal TOP	EA002107
STOF-310-SEC-102-0	54	B	Internal TOP	EA002107
STOF-355-SEC-102-0	54	B	Internal TOP	EA002107
STOF-400-SEC-102-0	54	B	Internal TOP	EA002107
STOF-450-SEC-302-0	54	B	Internal TOP	EA002107
STOF-500-SEC-302-0	54	B	Internal TOP	EA002107
STOF-630-SEC-302-0	54	B	Internal TOP	EA002107

AC STOF SHUTTER ROOF FAN

Part Number (AC)	Part Code	Motor nominal data at 50 Hz Supply voltage	Power kW	Max current A	Speed r/min	Speed fan r/min	Maximum Operating Temp°C	Isolator
STOF-190-SAC-102-0	ST191211	1x230V 50/60 Hz	0.052	0.23	2350	2170	65	EA002000
STOF-225-SAC-102-0	ST221211	1x230V 50/60 Hz	0.155	0.68	2500	2450	60	EA002000
STOF-310-SAC-102-0	**ST311411**	**1x230V 50/60 Hz**	**0.137**	**0.62**	**1325**	**1300**	**60**	**EA002000**
STOF-355-SAC-102-0	**ST351411**	**1x 230 V 50 Hz**	**0.27**	**1.18**	**1330**	**1300**	**60**	**EA002000**
STOF-355-SAC-302-0	**ST351413**	**3x230VD 50/60Hz/ 3x400VY 50/60 Hz**	**0.27**	**0.72**	**1390**	**1390**	**60**	**EA002000**
STOF-400-SAC-102-0	**ST401411**	**1x230V 50/60 Hz**	**0.47**	**2.05**	**1340**	**1350**	**60**	**EA002000**
STOF-400-SAC-302-0	ST401413	3x400VYD 50 Hz/ 3x400 VYD 60 Hz	0.515	1.19	1400	1200	60	EA002000
STOF-450-SAC-302-0	**ST451413**	**3x230VD/400VY 50 Hz**	**0.71**	**1.45**	**1350**	**1350**	**60**	**EA002000**
STOF-500-SAC-302-0	**ST501413**	**3x230VD/400VY 50 Hz**	**1.52**	**2.91**	**1370**	**1360**	**60**	**EA002000**

Horizontal shutter AC	IP class	Insulation	Motor protection	Transformer	Current A	IP class	Voltage
STOF-190-SAC-102-0	44	B	Internal TOP	EA900000	1	54	230VAC 50/60 Hz
STOF-225-SAC-102-0	44	F	Internal TOP	EA900000	1	54	230VAC 50/60 Hz
STOF-310-SAC-102-0	44	B	Internal TOP	EA900000	1	54	230VAC 50/60 Hz
STOF-355-SAC-102-0	44	F	Internal TOP	EA900001	1.5	54	230VAC 50/60 Hz
STOF-355-SAC-302-0	44	F	TOP brought out	EA900029	2.5	54	400VAC 50/60 Hz
STOF-400-SAC-102-0	54	F	TOP brought out	EA900008	2.5	54	230VAC 50/60 Hz
STOF-400-SAC-302-0	54	F	TOP brought out	EA900029	2.5	54	400VAC 50/60 Hz
STOF-450-SAC-302-0	54	F	TOP brought out	EA900029	2.5	54	400VAC 50/60 Hz
STOF-500-SAC-302-0	54	F	TOP brought out	EA900030	4	54	400VAC 50/60 Hz

The part numbers shown above are for the standard un-insultated, aluzinc finish. Wiring diagrams, please see pages 10-11 of PDF document.

Products in **bold** are available from our UK Distributors on next day delivery, if ordered by 4pm. Please call to confirm availability on 01206 222 555.

K_{OCT} FACTORS FOR SOUND DATA (STOF SHUTTER PRODUCT)

				K Oct Correction factors (dB)							
				Octave band mid-frequency (Hz)							
Fan code	Sound path	Min rpm	Max rpm	63	125	250	500	1000	2000	4000	8000
STOF-190-Sbb-10c-0	Surroundings	0	766	5	-1	-6	-2	-3	-11	-19	-20
STOF-190-Sbb-10c-0	Surroundings	767	1533	-6	-4	-6	-2	-6	-5	-15	-28
STOF-190-Sbb-10c-0	Surroundings	1534	3042	-14	-11	-3	-3	-7	-5	-12	-16
STOF-190-Sbb-10c-0	Surroundings	3043	3660	-16	-14	-5	-2	-7	-6	-11	-13
STOF-190-Sbb-10c-0	To the inlet duct	0	766	5	-2	-5	-7	0	-11	-21	-23
STOF-190-Sbb-10c-0	To the inlet duct	767	1533	-9	-2	-5	-5	-10	-5	-7	-30
STOF-190-Sbb-10c-0	To the inlet duct	1534	3042	-11	-8	-1	-5	-10	-8	-11	-16
STOF-190-Sbb-10c-0	To the inlet duct	3043	3660	-13	-9	-5	0	-10	-9	-13	-14
STOF-225-Sbb-10c-0	Surroundings	0	1533	-9	-5	-6	-4	-5	-5	-17	-24
STOF-225-Sbb-10c-0	Surroundings	1534	2480	-10	-9	-5	-4	-7	-4	-13	-15
STOF-225-Sbb-10c-0	To the inlet duct	0	1533	-6	-2	-4	-10	-5	-9	-18	-24
STOF-225-Sbb-10c-0	To the inlet duct	1534	2480	-7	-8	-2	-10	-9	-10	-15	-19
STOF-310-Sbb-10c-0	Surroundings	0	893	1	-3	0	0	-5	-13	-20	-26
STOF-310-Sbb-10c-0	Surroundings	894	1717	-7	-4	2	-2	-5	-10	-16	-26
STOF-310-Sbb-10c-0	To the inlet duct	0	893	-1	0	-2	-6	-11	-9	-23	-29
STOF-310-Sbb-10c-0	To the inlet duct	894	1717	-11	-2	0	-6	-9	-12	-15	-25
STOF-355-Sbb-10c-0	Surroundings	0	893	1	-3	0	0	-5	-13	-20	-26
STOF-355-Sbb-10c-0	Surroundings	894	1378	-8	-3	-2	-1	-4	-10	-18	-27
STOF-355-Sbb-10c-0	To the inlet duct	0	893	-1	0	-2	-6	-11	-9	-23	-29
STOF-355-Sbb-10c-0	To the inlet duct	894	1378	-13	-1	-3	-7	-10	-13	-17	-26
STOF-355-Sbb-30c-0	Surroundings	0	893	1	-3	0	0	-5	-13	-20	-26
STOF-355-Sbb-30c-0	Surroundings	894	1390	-8	-3	-2	-1	-4	-10	-18	-27
STOF-355-Sbb-30c-0	To the inlet duct	0	893	-1	0	-2	-6	-11	-9	-23	-29
STOF-355-Sbb-30c-0	To the inlet duct	894	1390	-13	-1	-3	-7	-10	-13	-17	-26
STOF-400-Sbb-10c-0	Surroundings	0	893	3	0	1	-2	-4	-12	-20	-29
STOF-400-Sbb-10c-0	Surroundings	894	1340	-3	0	0	-3	-3	-11	-19	-27
STOF-400-Sbb-10c-0	To the inlet duct	0	893	-1	4	1	-5	-8	-6	-12	-29
STOF-400-Sbb-10c-0	To the inlet duct	894	1340	-10	2	3	-4	-6	-11	-13	-14
STOF-400-Sbb-30c-0	Surroundings	0	893	3	0	1	-2	-4	-12	-20	-29
STOF-400-Sbb-30c-0	Surroundings	894	1315	-3	0	0	-3	-3	-11	-19	-27
STOF-400-Sbb-30c-0	To the inlet duct	0	893	-1	4	1	-5	-8	-6	-12	-29
STOF-400-Sbb-30c-0	To the inlet duct	894	1315	-10	2	3	-4	-6	-11	-13	-14
STOF-450-Sbb-30c-0	Surroundings	0	893	-2	-3	-2	-2	-4	-9	-16	-27
STOF-450-Sbb-30c-0	Surroundings	894	1566	-11	-2	-4	-4	-4	-7	-11	-20
STOF-450-Sbb-30c-0	To the inlet duct	0	893	0	-4	-3	-10	-10	-13	-20	-31
STOF-450-Sbb-30c-0	To the inlet duct	894	1566	-12	-2	-6	-12	-11	-12	-16	-24
STOF-500-Sbb-30c-0	Surroundings	0	766	-4	-2	-1	-4	-2	-12	-18	-25
STOF-500-Sbb-30c-0	Surroundings	767	1574	-7	0	-1	-2	-5	-9	-14	-19
STOF-500-Sbb-30c-0	To the inlet duct	0	766	0	-1	-5	-11	-6	-14	-21	-29
STOF-500-Sbb-30c-0	To the inlet duct	767	1574	-9	0	-4	-9	-10	-13	-18	-24
STOF-630-Sbb-30c-0	Surroundings	0	893	1	3	0	-3	-4	-10	-16	-25
STOF-630-Sbb-30c-0	Surroundings	894	1340	-8	2	-1	-3	-5	-7	-13	-16
STOF-630-Sbb-30c-0	To the inlet duct	0	893	11	3	-3	-6	-7	-12	-21	-27
STOF-630-Sbb-30c-0	To the inlet duct	894	1340	-6	6	-3	-8	-9	-10	-17	-23

PERFORMANCE TABLE

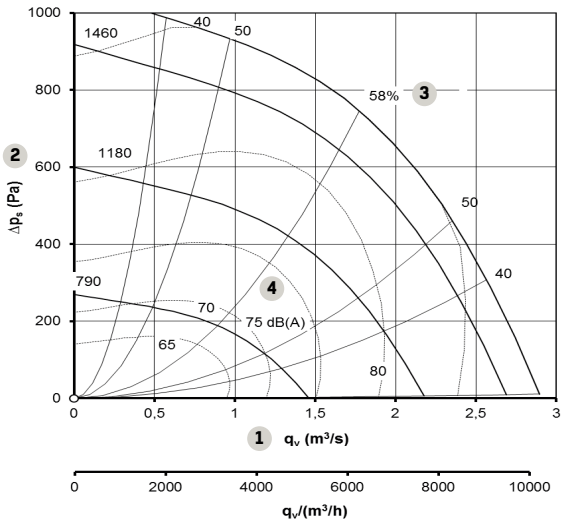
EC STOF SHUTTER ROOF FAN

	Pressure (Pa)												
Horizontal shutter EC	0	50	100	150	200	250	300	350	400	450	500	600	700
STOF-190-SEC-102-0	0.18	0.17	0.16	0.15	0.14	0.13	0.11	0.10	0.08	0.03			
STOF-225-SEC-102-0	0.25	0.23	0.21	0.19	0.17	0.13	0.07						
STOF-310-SEC-102-0	0.51	0.49	0.47	0.44	0.41	0.35	0.24						
STOF-355-SEC-102-0	0.76	0.70	0.64	0.55	0.43	0.20							
STOF-400-SEC-102-0	1.11	1.06	1.01	0.93	0.85	0.75	0.60	0.26					
STOF-450-SEC-302-0	1.97	1.92	1.86	1.81	1.75	1.68	1.46	1.54	1.46	1.36	1.25	0.95	
STOF-500-SEC-302-0	2.99	2.94	2.88	2.83	2.76	2.70	2.63	2.56	2.48	2.40	2.33	2.15	1.90
STOF-630-SEC-302-0	4.63	4.55	4.45	4.35	4.24	4.13	4.01	3.90	3.75	3.60	3.45	3.07	2.62
	Airflow m^3/s												

AC STOF SHUTTER ROOF FAN

	Pressure (Pa)												
Horizontal shutter AC	0	50	100	150	200	250	300	350	400	450	500	600	700
STOF-190-SAC-102-0	0.27	0.26	0.24	0.23	0.21	0.19	0.17	0.14	0.08				
STOF-225-SAC-102-0	0.27	0.26	0.25	0.24	0.22	0.20	0.17	0.15	0.09				
STOF-310-SAC-102-0	0.46	0.43	0.39	0.34	0.26	0.01							
STOF-355-SAC-102-0	0.77	0.71	0.66	0.60	0.52	0.41							
STOF-355-SAC-302-0	0.80	0.76	0.71	0.65	0.58	0.49	0.37	0.09	0.00				
STOF-400-SAC-102-0	1.13	1.08	1.03	0.97	0.89	0.81	0.69	0.51	0.21				
STOF-400-SAC-302-0	1.18	1.14	1.08	1.03	0.96	0.88	0.79	0.65	0.47	0.23	0.01		
STOF-450-SAC-302-0	1.64	1.58	1.52	1.45	1.37	1.29	1.19	1.09	0.95	0.77			
STOF-500-SAC-302-0	2.56	2.51	2.44	2.38	2.31	2.23	2.15	2.06	1.97	1.87	1.76	1.45	0.84
STOF-630-SAC-302-0	4.70	4.61	4.52	4.42	4.32	4.22	4.10	3.98	3.85	3.73	3.58	3.25	2.85
	Airflow m^3/s												

FAN CHART - EXPLANATION AND DEFINITIONS



SYMBOLS

1.	qv	Air flow	m³/s, m³/h
2.	Δp_t	Static pressure	Pa
3.	η	Total fan efficiency	%
4.	L_{wA}	A-weighted total sound power level	dB(A)
	L_{pA}	A-weighted total sound pressure level	dB(A)
	ΔL	Remote attenuation	dB

SOUND PRESSURE LEVEL

The total A-weighted sound power level, LwA emitted from the power roof ventilator to the surroundings can be read in the chart. The sound pressure level at different distances from the power roof ventilator can be determined by using the following formula:

$L_{pA} = L_{wA} - \Delta L$

Distance L (m)	1	3	5	10	15	20	25	30	40
Attenuation ⊥ (dB)	7	17	22	28	31	34	36	37	40

SOUND LEVEL AT DIFFERENT OCTAVE BANDS

			Correction Koct (dB)							
			Octave band mid-frequency (Hz)							
Sound path	MinRPM	MaxRPM	63	125	250	500	1000	2000	4000	8000
Surroundings	0	766	5	-1	-6	-2	-3	-11	-19	-20
To the inlet duct	0	766	5	-2	-5	-7	0	-11	-21	-23

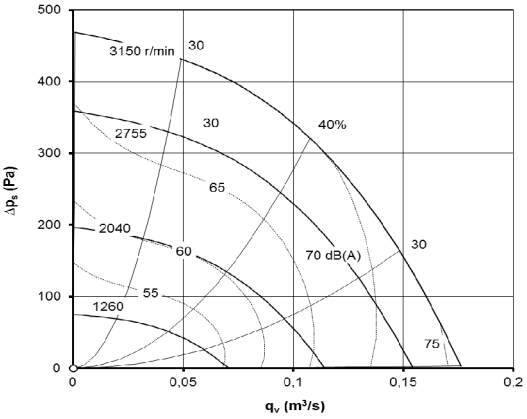
The total A-weighted sound power level, LwA, emitted from the power roof ventilator to the surroundings can be read in the fan chart. The sound power level by octave band to the surroundings and to the inlet duct (without A-weighting) can be obtained by using the following formula:

$L_{woct} = L_{wA} + K_{oct}$. The corrections are given in Koct table for both sound paths and correct speed area.

PERFORMANCE CHARTS

FAN CHART, SHUTTER – STOF-190

STOF-190_SEC 1 - ST193211



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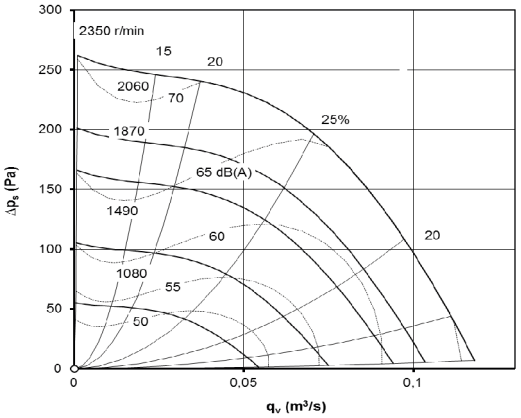
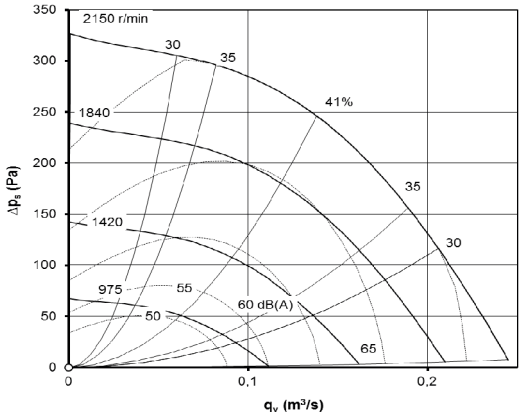
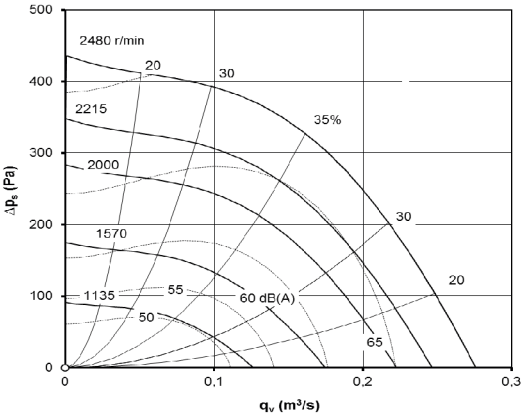


FAN CHART, SHUTTER – STOF-225

STOF-225_SEC 1 - ST223211

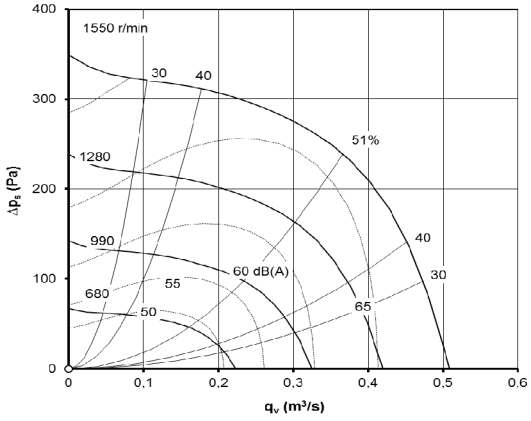


STOF-225_SAC 1 - ST221211

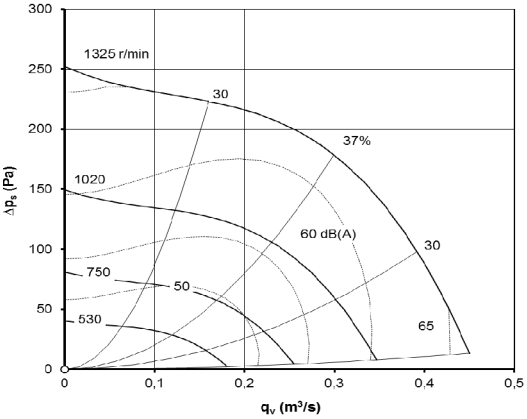


FAN CHART, SHUTTER – STOF-310

STOF-310_SEC 1 - ST313411



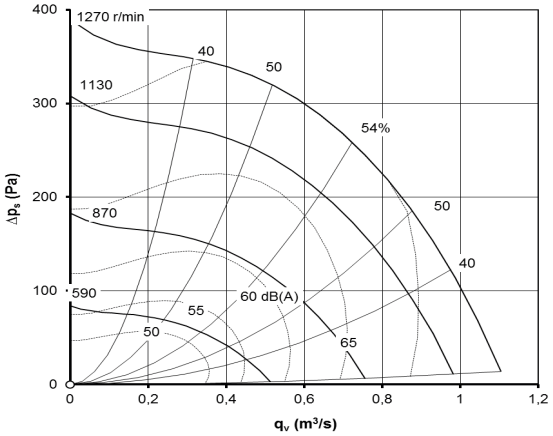
STOF-310_SAC 1 - ST311411



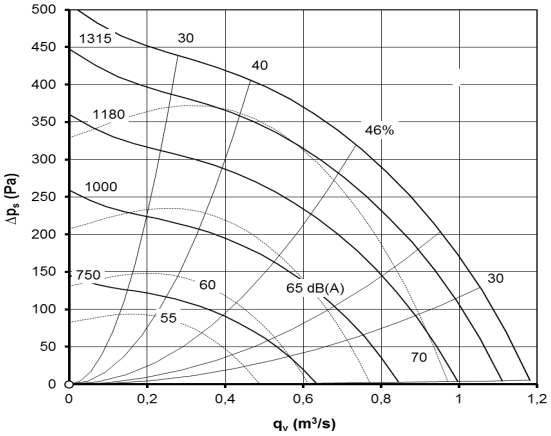
PERFORMANCE CHARTS

FAN CHART, SHUTTER – STOF-400

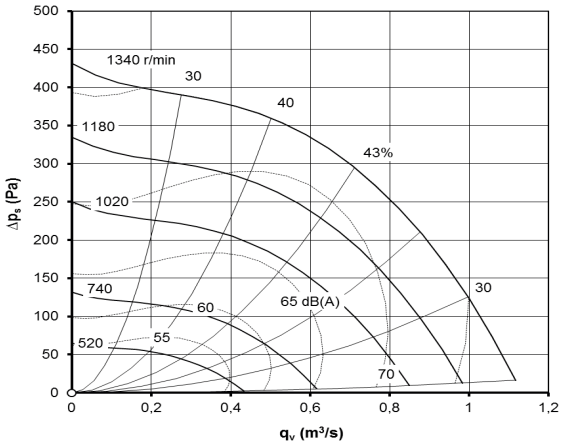
STOF-400_SEC 1 - ST403411



STOF-400_SAC 3 - ST401413

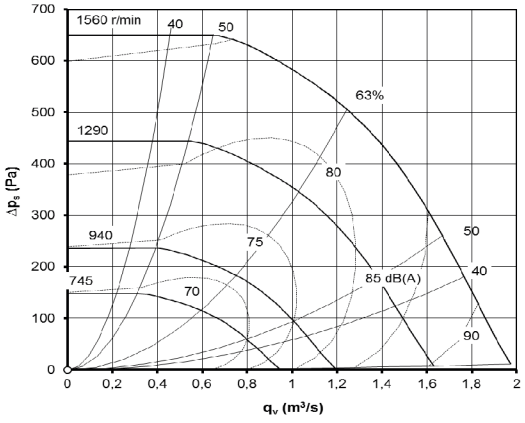


STOF-400_SAC 1 - ST401411

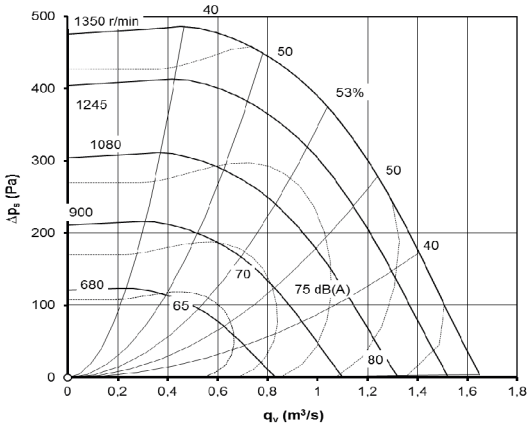


FAN CHART, SHUTTER – STOF-450

STOF-450_SEC 3 - ST453413



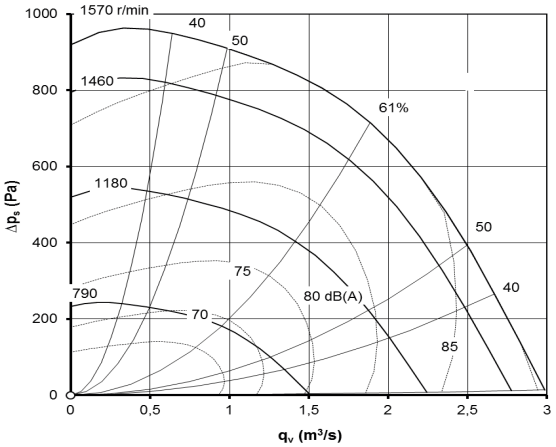
STOF-450_SAC 3 - ST451413



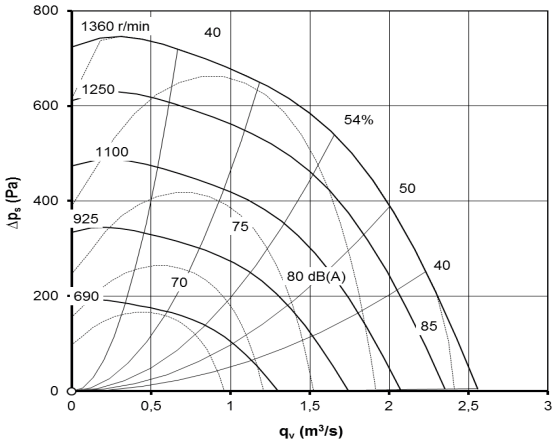
PERFORMANCE CHARTS

FAN CHART, SHUTTER – STOF-500

STOF-500_SEC 3 - ST503413

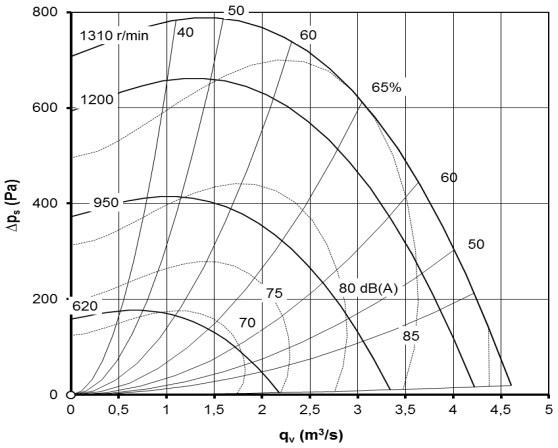


STOF-500_SAC 3 - ST501413

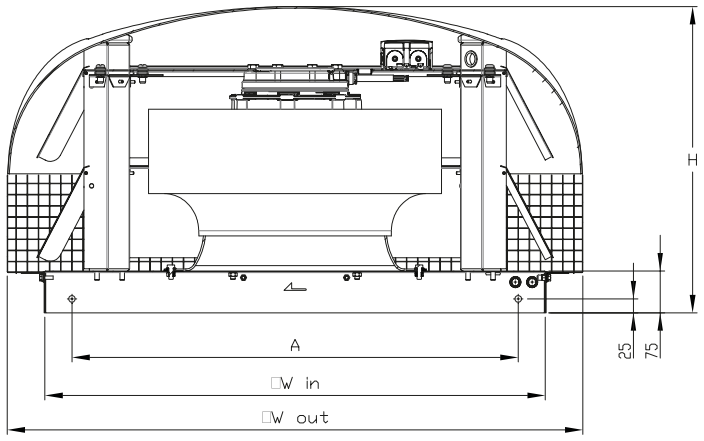


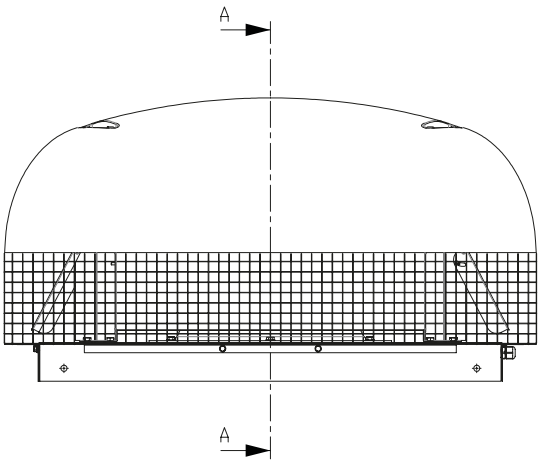
FAN CHART, SHUTTER – STOF-630

STOF-630_SEC 3 - ST633413



DRAWINGS AND DIMENSIONS



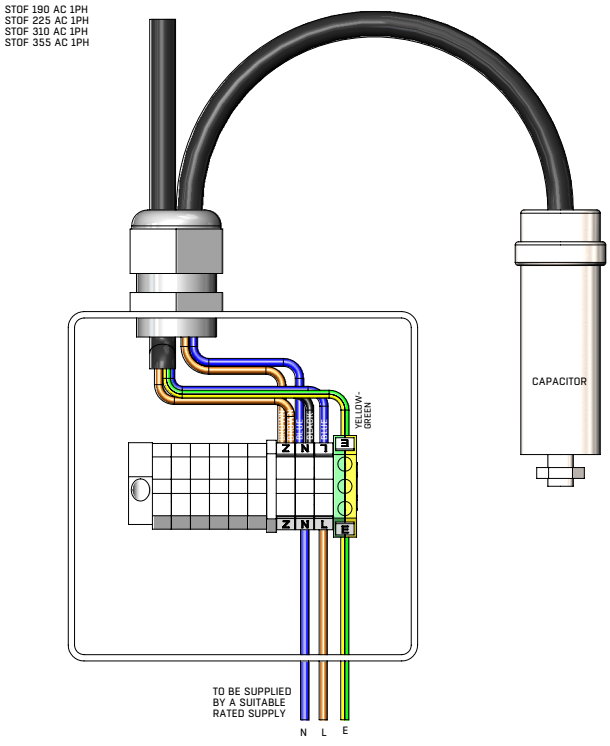


STOF Unit AC and EC							DSC & DSM		
Fan size	A	H	W_{in}	W_{out}	H_{out}	Weight	Size	E	Adaptor Required
190	234	216	342	480	-	7	200	450	No
225	328	261	447	480	-	10		450	No
310	328	340	447	480	-	14		450	No
355	438	383	557	600	-	18	250	525	No
400	508	398	627	710	411	24	330	600	No
450	598	433	717	820	441	32		600	843723
450	598	433	717	820	441	32	400	700	No
500	778	527	897	1030	540	53		700	843726
500	778	527	897	1030	540	53	500	900	No
630	998	595	1117	1300	597	76		900	843729
630	998	595	1117	1300	597	76	630	1050	844405
630	998	595	1117	1300	597	76	760	1250	844717

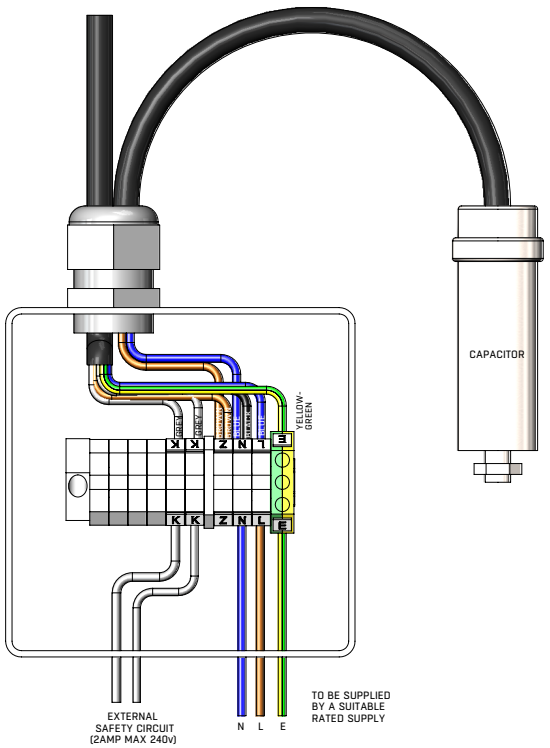
All dimensions shown in mm

WIRING DIAGRAMS - STOF

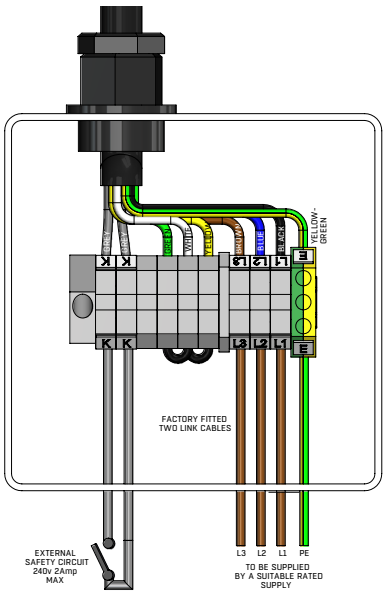
STOF AC 1ph 190, 225, 310, 355



STOF AC 1ph 400

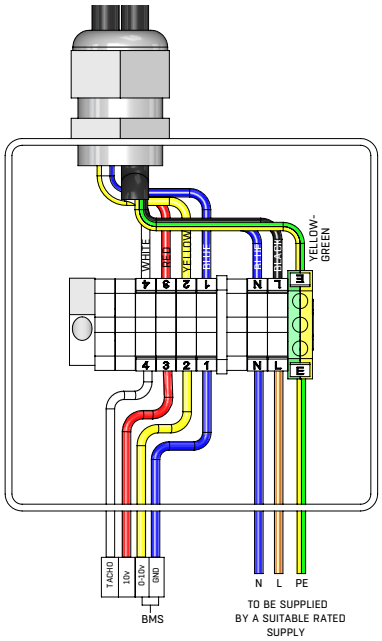


STOF AC 3ph 355, 450, 500, 630



WIRING DIAGRAMS - STOF

STOF EC 1ph 190, 225, 310, 355



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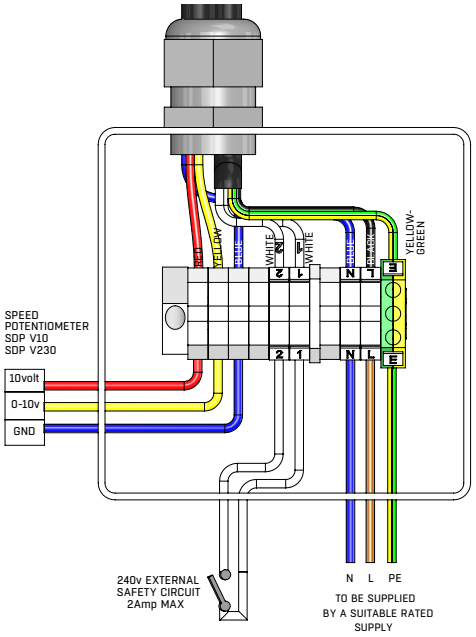
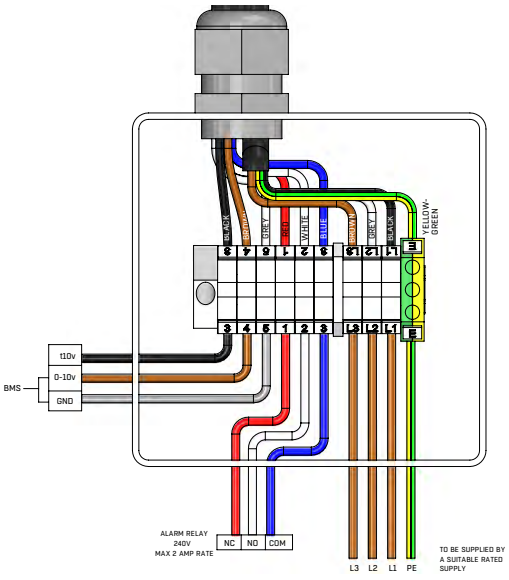


STOF EC 3ph 450



STOF EC 3ph 500, 630