



Stainless Steel Fabrication

Commercial Kitchen Design and Installation

Ventilation strategy for the below address

Address

65 Windsor Road,
Prestwich,
Manchester,
Bury, M25 0DB

Installation of extraction system proposed at the above address to *EMAQ Guidance Control of Odour and Noise from Commercial Kitchen Exhaust Systems*

All canopy and ductwork to *BESA DW172 DW144*

If required a noise assessment can be undertaken we recommend noiseharvest.com

Canopy dimensions to Dw172 in mm

Length	Width	Depth Back	Depth Front
2500	1200	500	430

Extraction Filtration

Longar type 3 baffle filters

Supply Air Filtration

Longar G4 Filter

Odour control

1 x Rydair 2500 electrostatic precipitation unit with built in uv

1 x mesh filter 495 x 495 x 50mm

1 x G4 Pleated filter 495 x 495 50mm



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UNIT 5 FIREFLY SQUARE PLANTATION ROAD BURSCOUGH L408JT

Tel: 01704-893945 Fax: 0844-4122296

Email: fusionhot1@gmail.com Web: www.facebook.com/fusionhot

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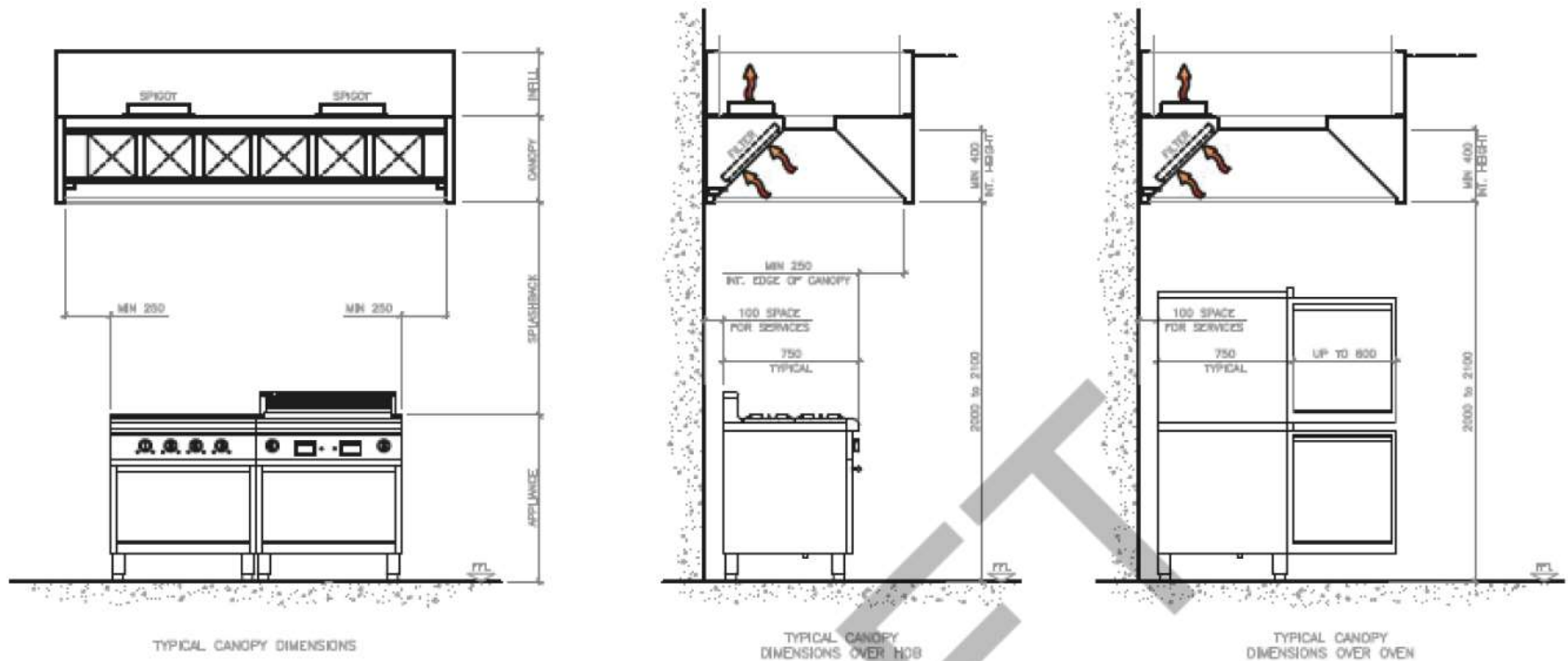
Extract Fan Model	Maximum absorbed power (W)	Maximum absorbed current (A)		Maximum air volume (m3/h)	Sound pressure level* (dB(A)3m)	Speed (r.p.m.)	Weight (Kg)
		230v	400v				
TCBB 450	594	2.6		6810	63	1410	21
Supply Air Fan	Maximum absorbed power (W)	Maximum absorbed current (A)		Maximum air volume (m3/h)	Sound pressure level* (dB(A)3m)	Speed (r.p.m.)	Weight (Kg)
		230V	400V				
HCBB 4-400/h	315	1.5		4830	62	1360	9

Attenuation Octave – Band Mid Frequencies (Hz)									
Diameter	Length	63	125	250	500	1000	2000	4000	8000
450 1D	450	2	3	6	12	13	11	10	6
450 1D	450	2	3	6	12	13	11	10	6

Cleaning and maintenance	
Cleaning and maintenance schedule to be supplied to client to TR19 guidelines This must be carried out by a competent registered BESA Ductwork cleaner no longer than 12 month intervals or earlier	

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Typical extraction canopy's below



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Risk Assessment for Odour EMAQ

Odour control must be designed to prevent odour nuisance in a given situation. The following score methodology is suggested as a means of determining odour control requirements using a simple risk assessment approach. The odour control requirements considered here are consistent with the performance requirements listed in this report.

Criteria	Score	Score	Details
Dispersion	Very poor	20	Low level discharge, discharge into courtyard or restriction on stack.
	Poor	15	Not low level but below eaves, or discharge at below 10 m/s.
	Moderate	10	Discharging 1m above eaves at 10 -15 m/s.
	Good	5	Discharging 1m above ridge at 15 m/s.
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from Kitchen discharge.
	Medium	5	Closest sensitive receptor between 20 and 100m from kitchen discharge.
	Far	1	Closest sensitive receptor more than 100m from kitchen discharge ¹ .
Size of kitchen	Large	5	More than 100 covers or large sized take away.
	Medium	3	Between 30 and 100 covers or medium sized take away.
	Small	1	Less than 30 covers or small take away ¹ .
Cooking type (odour and grease loading)	Very high	10	Pub (high level of fried food), fried chicken, burgers or fish & chips. <i>Turkish, Middle Eastern or any premises cooking with solid fuel</i>
	High	7	Vietnamese, Thai, Indian, <i>Japanese, Chinese, steakhouse</i>
	Medium	4	<i>Cantonese, Italian, French, Pizza (gas fired),</i>
	Low	1	Most pubs (<i>no fried food, mainly reheating and sandwiches etc</i>), <i>Tea rooms</i> ¹



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Premises type	Dispersion	Proximity of receptors	Size of Kitchen	Cooking Type	Total Score
Italian takeaway	15	10	1	4	30

Impact Risk	Odour Control Requirement	Significance Score*
Low to Medium	Low level odour control	Less than 20
High	High level odour control	20 to 35
Very High	Very high level odour control	More than 35
* based on the sum of contributions from dispersion, proximity of receptors, size of kitchen and cooking type:		



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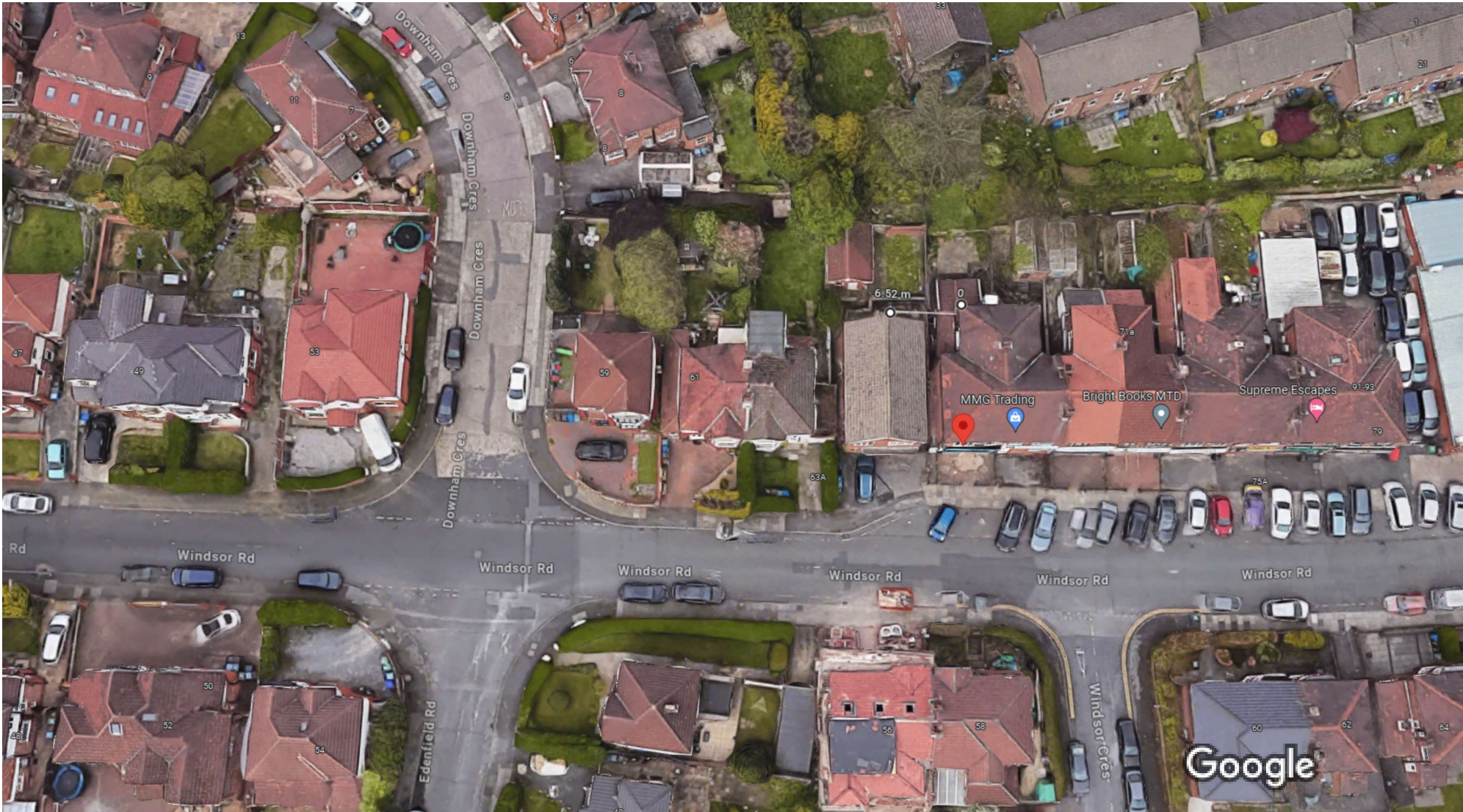
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Odour Arrestment Plant Performance	
Low to medium level control may include:	1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.1 second Residence time). 2. Fine filtration followed by counteractant/neutralising system to achieve the same level of Control as 1.
High level odour control may include	1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.2 - 0.4 Second residence time). 2. Fine filtration or ESP followed by UV ozone system to achieve the same level of control As 1.
Very high level of odour control may include:	1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.4 0.8 Second residence time). 2. Fine filtration or ESP followed by carbon filtration and by counteractant/neutralising system To achieve the same level of control as 1. 3. Fine filtration or ESP followed by UV ozone system to achieve the same level of control As 1.



65 Windsor Rd

nearest sensitive receptor approx. 7 meters



Imagery ©2023 Google, Imagery ©2023 Airbus, Infoterra Ltd & Bluesky, The GeoInformation Group, Map data ©2023 5 m



65 Windsor Rd



Directions



Save



Nearby



Send to
phone



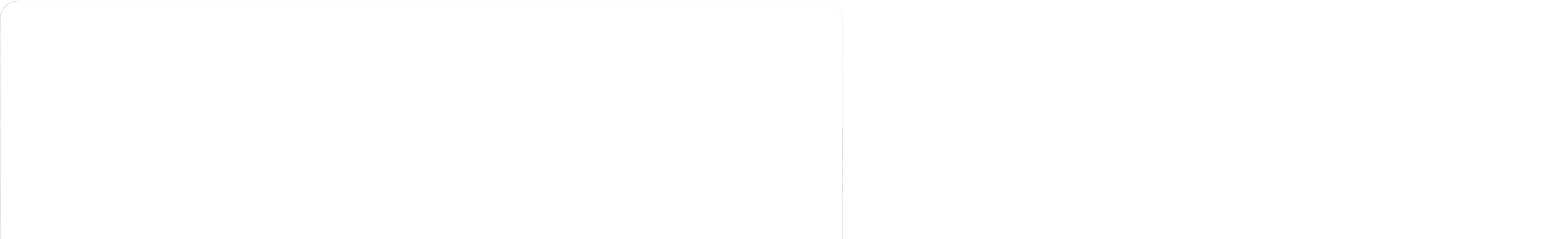
Share



65 Windsor Rd, Prestwich, Manchester M25 0DB

GPFW+WG Manchester

Photos



Measure distance
Total distance: 6.52 m (21.40 ft)

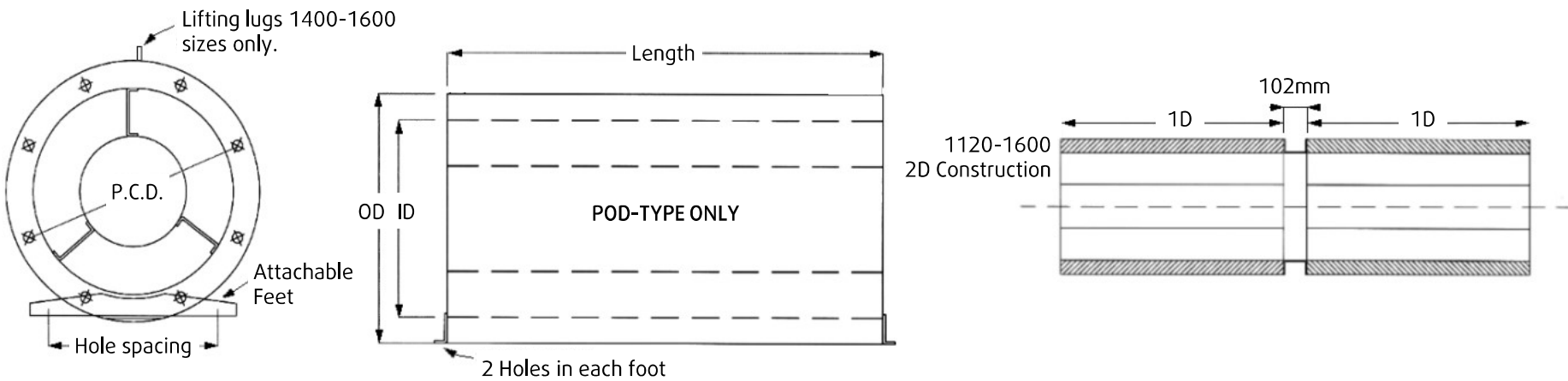
CYLINDRICAL SILENCERS (TYPE LP AND HP)

Features

- Casing are rolled, pre-galvanised sheet steel with spun end rings incorporating tapped inserts for fixing.
- Absorbent material is acoustic grade mineral fibre with a layer of erosion resistant facing and is further protected by a sheet of pre-galvanised perforated steel.
- Moisture resistant lining available for wet conditions or critically clean applications.
- Type LP silencer bore diameters range from 315mm to 1600mm in lengths of equal to or twice the bore diameter (1D or 2D). Pressure loss for type LP silencers is the same as a plain duct.
- Type HP silencers have a centrally mounted absorbent pod in the airway for increased attenuation.



Dimensions



In metric

Metric (mm)									Weight (kg)			
Sizes		No. of Holes	P.C.D.	Thread	Mounting Foot		Length		Type LP		Type HP	
ID	OD				Holes Dia.	Spacing	1D	2D	1D	2D	1D	2D
315	415	8	355	M8	10	265	315	630	10	17	13	19
355	455	8	395	M8	10	305	355	710	12	20	15	24
400	500	8	450	M8	12	350	400	800	15	25	18	30
450	600	8	500	M8	12	400	450	900	20	33	24	39
500	650	12	560	M8	12	450	500	1000	25	41	29	48
560	710	12	620	M8	12	510	560	1120	30	50	35	58
630	780	12	690	M8	12	580	630	1260	35	61	42	72
710	860	16	770	M8	12	660	710	1420	44	76	53	90
800	1000	16	860	M8	12	750	800	1600	55	96	66	116
900	1100	16	970	M12	14	850	900	1800	70	129	84	150
1000	1200	16	1070	M12	14	950	1000	2000	82	157	100	182
1120	1320	20	1160	M12	14	1070	1120	2342	100	211	118	247
1250	1450	20	1320	M12	18	1150	1250	2540	127	266	147	306
1400	1600	20	1470	M12	18	1300	1400	2902	193	399	220	453
1600	1800	24	1680	M16	18	1500	1600	3302	311	637	362	739

Acoustic Performance
TYPE LP Attenuation

Metric (mm)									
Bore Dia. mm	Length	Octave – Band Mid Frequencies (Hz)							
		63	125	250	500	1000	2000	4000	8000
315	1D	1	2	4	9	11	10	9	7
	2D	1	2	5	11	16	12	11	10
355	1D	1	2	4	10	12	10	9	7
	2D	1	3	6	13	17	14	11	11
400	1D	1	3	5	10	13	11	9	8
	2D	2	4	7	14	18	15	11	12
450	1D	2	3	6	12	13	11	10	6
	2D	3	4	8	17	18	15	11	11
500	1D	2	3	6	13	14	10	10	5
	2D	3	4	8	19	18	14	11	10
560	1D	2	4	7	14	14	9	10	7
	2D	3	5	9	19	18	14	12	11
630	1D	2	5	7	15	13	8	9	8
	2D	3	6	9	19	19	14	13	12
710	1D	2	5	7	15	13	9	9	8
	2D	4	6	9	19	17	13	12	11
800	1D	3	5	8	16	12	9	9	8
	2D	4	6	10	19	15	12	11	10
900	1D	3	5	10	17	13	11	10	8
	2D	4	6	12	19	15	12	11	10
1000	1D	3	5	11	16	11	10	8	9
	2D	4	6	13	19	14	12	11	11
1120	1D	4	5	11	17	11	9	8	8
	2D	4	6	13	19	14	12	11	8
1250	1D	4	6	12	17	10	9	8	7
	2D	4	6	14	19	14	11	11	9
1400	1D	4	6	12	16	10	8	7	6
	2D	4	7	14	18	13	10	10	8
1600	1D	4	7	12	16	10	8	7	6
	2D	4	8	15	18	12	10	9	7

TYPE HP Attenuation

Metric (mm)									
Bore Dia. mm	Length	Octave – Band Mid Frequencies (Hz)							
		63	125	250	500	1000	2000	4000	8000
315	1D	2	5	5	9	18	20	18	15
	2D	2	6	6	12	20	25	20	17
355	1D	2	5	6	9	18	22	19	16
	2D	2	6	7	13	25	27	21	17
400	1D	2	6	6	10	19	24	20	17
	2D	3	7	8	14	29	29	23	18
450	1D	2	4	7	13	20	23	22	17
	2D	2	5	9	16	29	29	21	20
500	1D	2	3	8	16	21	22	21	17
	2D	2	4	10	20	29	30	20	26
560	1D	3	5	8	16	20	18	19	15
	2D	4	5	10	20	29	28	21	23
630	1D	3	5	8	15	19	16	14	12
	2D	5	6	10	19	29	25	21	20
710	1D	3	5	8	15	19	15	14	12
	2D	5	6	10	20	26	23	18	17
800	1D	4	5	8	16	19	15	14	13
	2D	5	7	11	22	23	21	16	14
900	1D	4	5	9	17	19	15	14	13
	2D	5	7	12	24	23	21	16	15
1000	1D	5	5	12	18	19	15	14	13
	2D	5	7	13	26	24	20	16	16
1120	1D	5	7	11	19	18	14	13	12
	2D	5	8	13	25	23	18	16	13
1250	1D	5	8	12	19	17	14	12	10
	2D	5	8	14	25	17	17	17	12
1400	1D	5	8	12	18	16	13	11	9
	2D	5	9	15	23	22	17	15	10
1600	1D	5	8	13	17	16	13	11	8
	2D	6	10	17	21	20	17	14	9



Range of cylindrical cased axial fans fitted with aluminium impellers and manufactured from high grade rolled galvanised steel and protected against corrosion by cataforesis primer and black polyester paint finish. Fitted with 2 contra rotating complementary impellers manufactured from die-cast aluminium. All models are supplied with pre-wired wiring junction box located on the outside of the fan casing for easy wiring access. Available with single or three phase 4 poles motors.

Motors

All the motors are IP65, Class F insulation (1), equipped with thermal protection. Single phase motors are variable voltage (Excepted TCBBX2/4-630). Three phase motors suitable for inverter control. Electrical supplies:
Single phase 230V-50Hz (Capacitor located inside the wiring terminal box)
Three phase 230/400V-50Hz.
(1) Working temperatures from -40°C up to 70°C.



Contra rotating: High pressure

Contra rotating system with two complementary impellers allowing the duplication of the pressure with the same air volume.



Corrosion resistance

Rolled steel casings and motor support protected by cataforesis primer and black polyester paint finish. Stainless steel screws.



Terminal box

Wiring terminal box with cable gland PG-11.



Impeller dynamically balanced

Impellers are dynamically balanced, according to ISO 1940 standard, giving vibration free operation.

TECHNICAL CHARACTERISTICS

Before installation check that the product electrical characteristics listed on the data plate label (voltage, power, frequency, etc.) match those of the intended electrical supply.

Model	Speed (rpm)	Diameter (mm)	Maximum absorbed power (W)	Maximum absorbed current (A)		Sound pressure level* (dB(A))	Maximum air volume (m³/h)	Weight (kg)	Speed controller RMB/T	Variable frequency inverter				
				to 230 V	to 400 V					VFTM		VFKB		
										1/230V**	3/400V	1/230V**	3/400V	
SINGLE PHASE														
TCBBx2/4-450	1420	450	1316	5,7	–	74	7.430	42	RMB-8	–	–	–	–	
TCBBx2/4-500	1370	500	1957	9,0	–	76	9.950	50	RMB-10	–	–	–	–	
TCBBx2/4-560	1370	560	2972	13,6	–	78	13.930	66	–	–	–	–	–	
TCBBx2/4-630	1400	630	3671	16,3	–	79	16.560	80	–	–	–	–	–	
THREE PHASE														
TCBTx2/4-450	1430	450	1309	5,2	3	74	7.250	42	RMT-5	VFTM MONO 1,1	VFTM TRI 1,1	VFKB 27	VFKB 45	
TCBTx2/4-500	1390	500	1700	5,8	3,4	76	9.800	50	RMT-5	VFTM MONO 1,1	VFTM TRI 1,5	VFKB 27	VFKB 45	
TCBTx2/4-560	1390	560	3173	10,0	5,8	78	15.170	66	–	VFTM MONO 2,2	VFTM TRI 3	–	VFKB 48	
TCBTx2/4-630	1445	630	4014	–	7,4	79	17.810	80	–	–	VFTM TRI 4	–	VFKB 48	

* Sound pressure level, measured in free field condition at a distance equivalent of three times the diameter of the impeller or a minimum of 1,5 meters whichever is the greater.
** Only for fans fitted with three phase motors 230/400V.

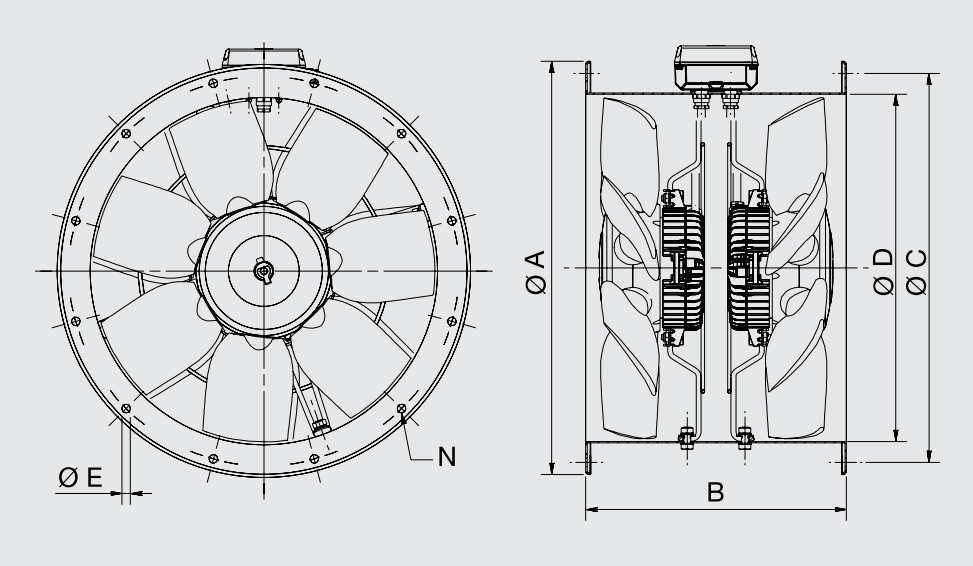
ACOUSTIC CHARACTERISTICS

The sound levels –NPS– shown in the technical characteristic chart, correspond to the value of sound pressure dB(A), measured in free field conditions at a distance equivalent to three times the diameter of the impeller with a minimum of 1.5 meters.
The following table shows the sound power level spectrums in dB(A) measured with the fan ducted, at both inlet and discharge sides.

Model	Air volume m³/h	63	125	250	500	1000	2000	4000	8000	Global
450 Inlet	6.600	46	73	85	82	85	79	72	64	90
	5.850	46	73	84	81	83	79	71	64	88
	4.300	58	70	80	80	83	79	71	64	87
450 Outlet	6.600	63	75	86	85	87	82	74	67	92
	5.850	53	73	85	84	87	81	74	67	91
	4.300	58	70	82	83	86	82	74	67	90
500 Inlet	9.000	48	78	87	85	87	81	74	67	92
	7.500	52	76	85	85	85	80	73	65	90
	6.000	60	73	83	82	85	80	73	66	89
500 Outlet	9.000	65	76	87	88	90	84	77	70	94
	7.500	62	75	86	87	88	83	76	69	92
	6.000	59	72	86	85	88	83	76	69	92

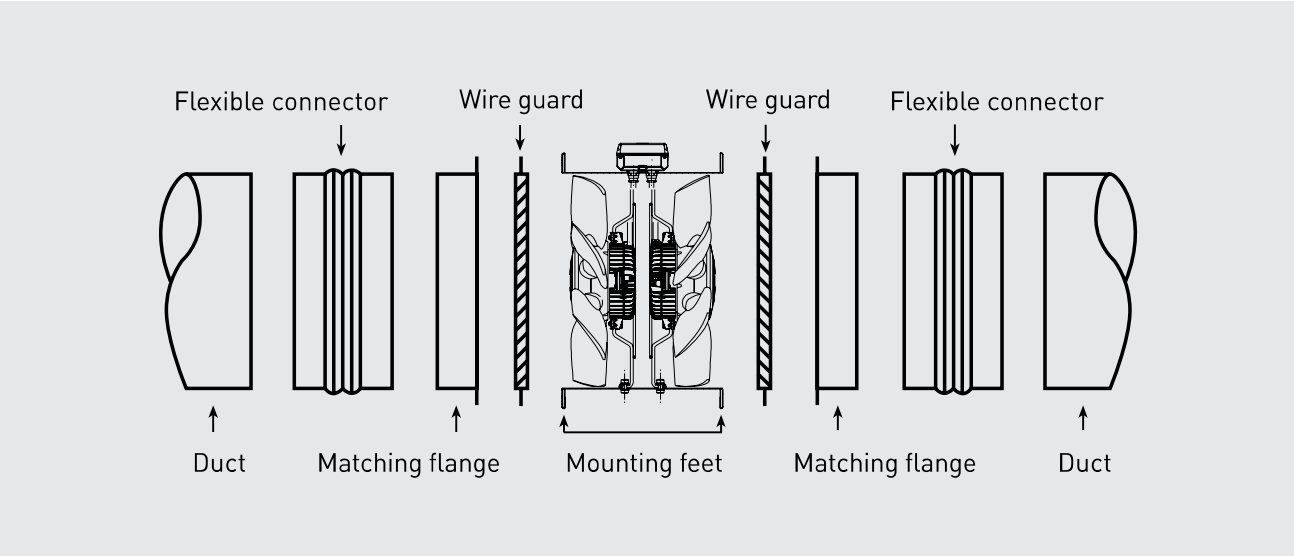
Model	Air volume m³/h	63	125	250	500	1000	2000	4000	8000	Global
560 Inlet	13.720	50	85	87	88	91	85	78	73	95
	10.800	57	79	83	86	89	84	78	72	93
	9.000	63	79	81	86	89	84	78	72	92
560 Outlet	13.720	74	86	85	91	94	88	81	75	97
	10.800	70	82	84	88	92	87	81	74	95
	9.000	74	81	85	89	92	87	81	74	95
630 Inlet	17.500	51	85	91	89	93	87	80	74	97
	15.600	55	85	85	88	91	86	80	73	95
	12.000	64	80	84	88	90	86	80	73	94
630 Outlet	17.500	73	87	88	93	95	89	83	77	99
	15.600	71	87	86	91	94	89	83	76	98
	12.000	67	84	86	90	94	89	84	76	97

DIMENSIONS (mm)



Model	Ø A	B	Ø C	Ø D	Ø E	Number of holes N
450	537	375	500	450	12	8
TCBBx2/4-500	595	520	560	500	12	12
TCBTx2/4-500	595	375	560	500	12	12
560	655	520	620	560	12	12
630	725	520	690	630	12	12

MOUNTING ACCESSORIES

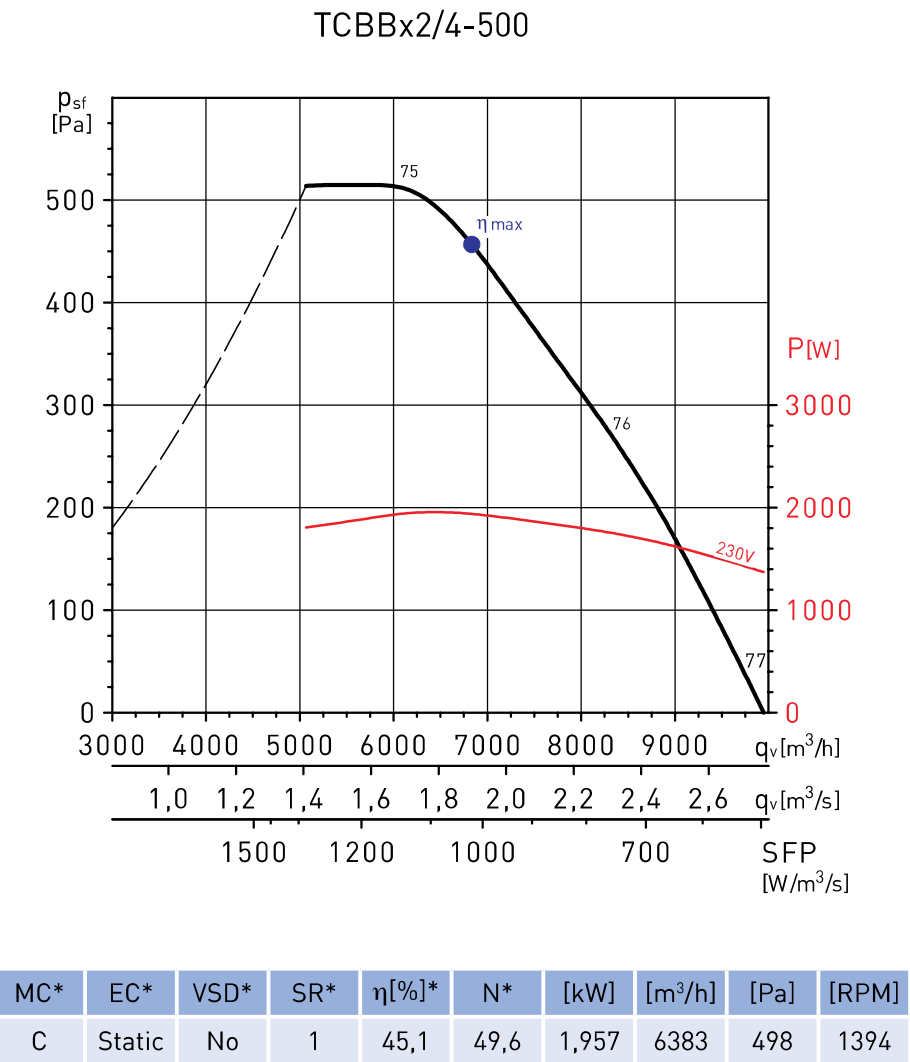


PERFORMANCE CURVES TCBBx2 / TCBTx2

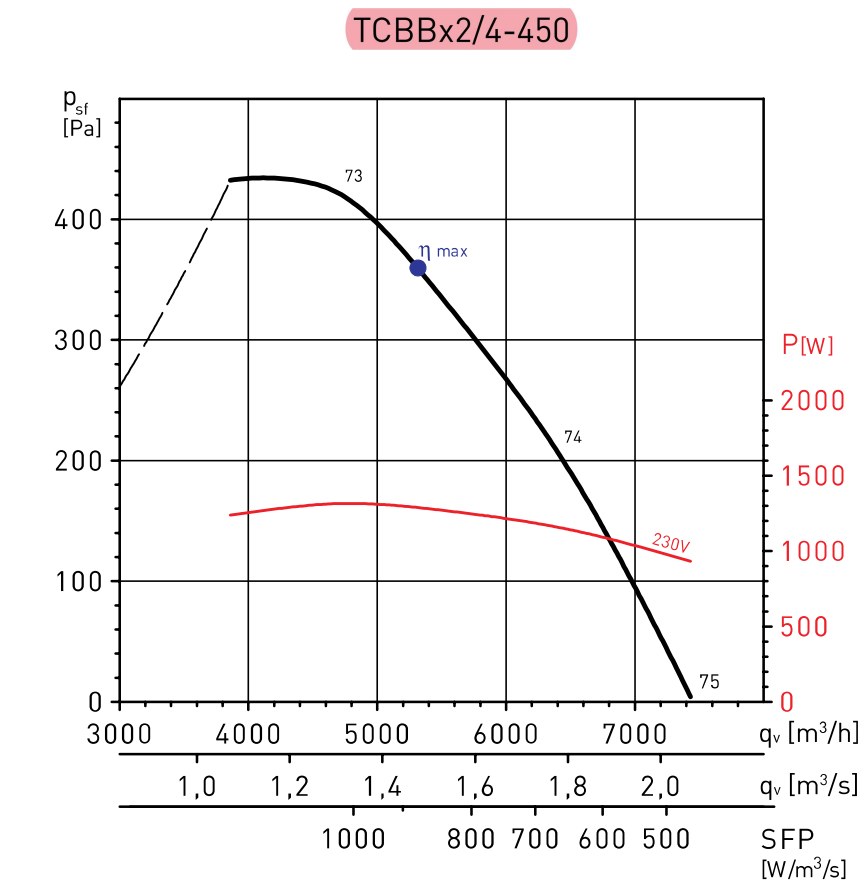
- q_v : Air volume in m^3/h and m^3/s .
- p_{sf} : Static pressure in Pa.
- SFP: Specific fan power in $W/m^3/s$.
- P: Input power in W.
- Measurement category: C or D depending on the models.
- Efficiency category: Static or Total depending on the models.
- Fan tested with inlet bellmouth.
- Fan efficiency without VSD.
- Air flow data in accordance with ISO 5801.
- Sound pressure level dB(A), measured in a free field distance equal to 3 times the diameter, with a minimum of 1,5 m.

MC	Measurement category
EC	Efficiency category
VSD	Speed control: supplied with the fan
SR	Specific ratio
η [%]	Efficiency
N	Efficiency grade
[kW]	Absorbed power
[m³/h]	Air volume
[Pa]	Static pressure
[RPM]	Speed

EXAMPLE CURVE

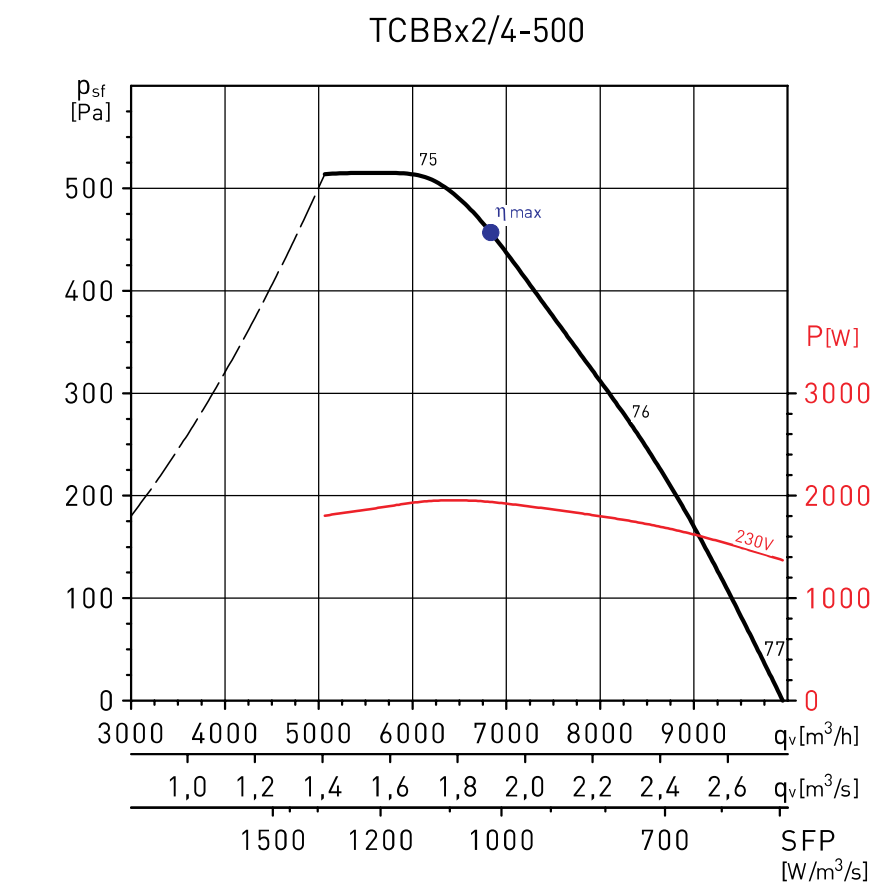


PERFORMANCE CURVES – 4 POLE MOTOR



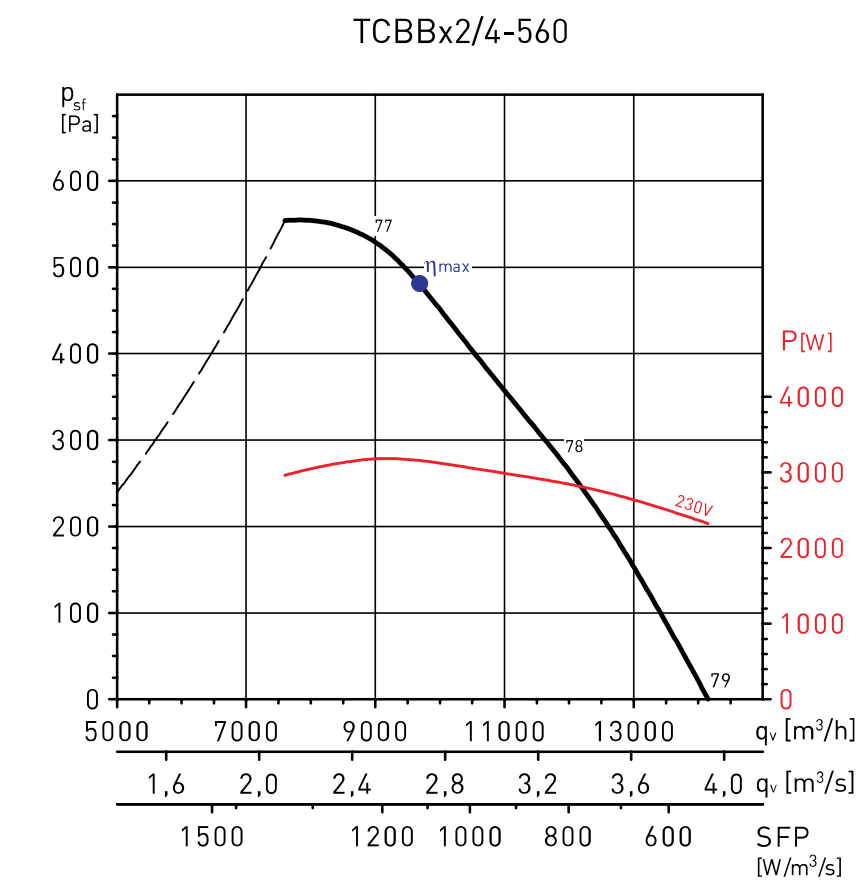
MC*	EC*	VSD*	SR*	η [%]*	N*	[kW]	[m^3/h]	[Pa]	[RPM]
C	Static	No	1	41,9	47,5	1,316	4842	411	1349

* See example curve.



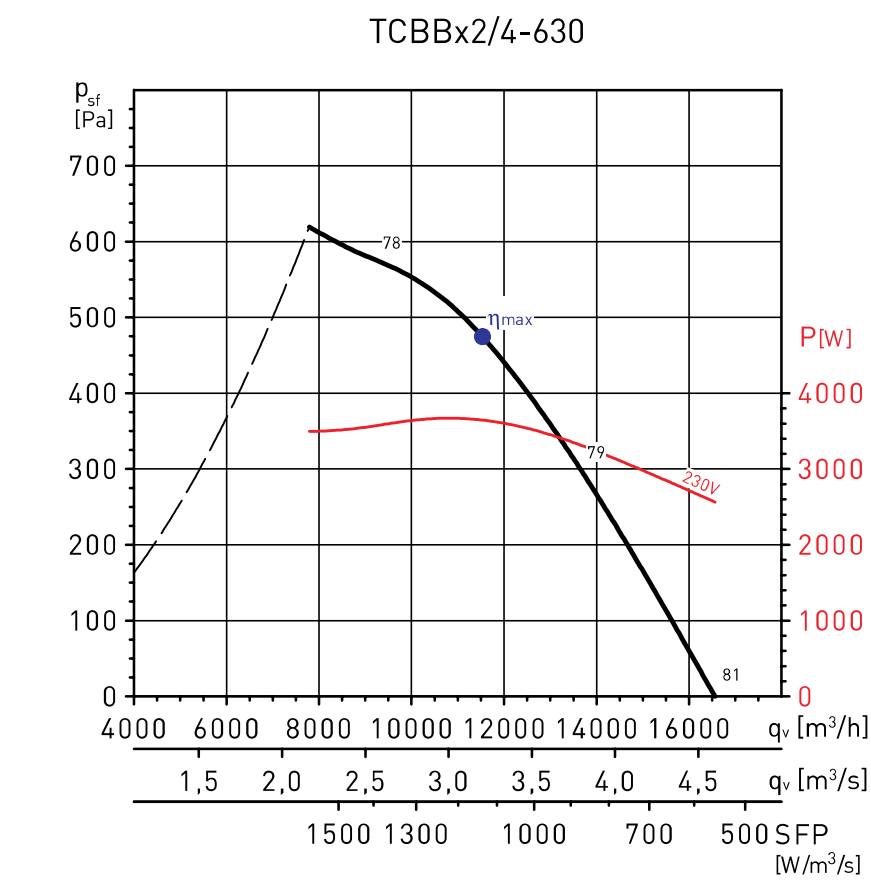
MC*	EC*	VSD*	SR*	η [%]*	N*	[kW]	[m^3/h]	[Pa]	[RPM]
C	Static	No	1	45,1	49,6	1,957	6383	498	1394

* See example curve.



MC*	EC*	VSD*	SR*	η [%]*	N*	[kW]	[m^3/h]	[Pa]	[RPM]
C	Static	No	1	41,9	45,2	2,970	8741	513	1311

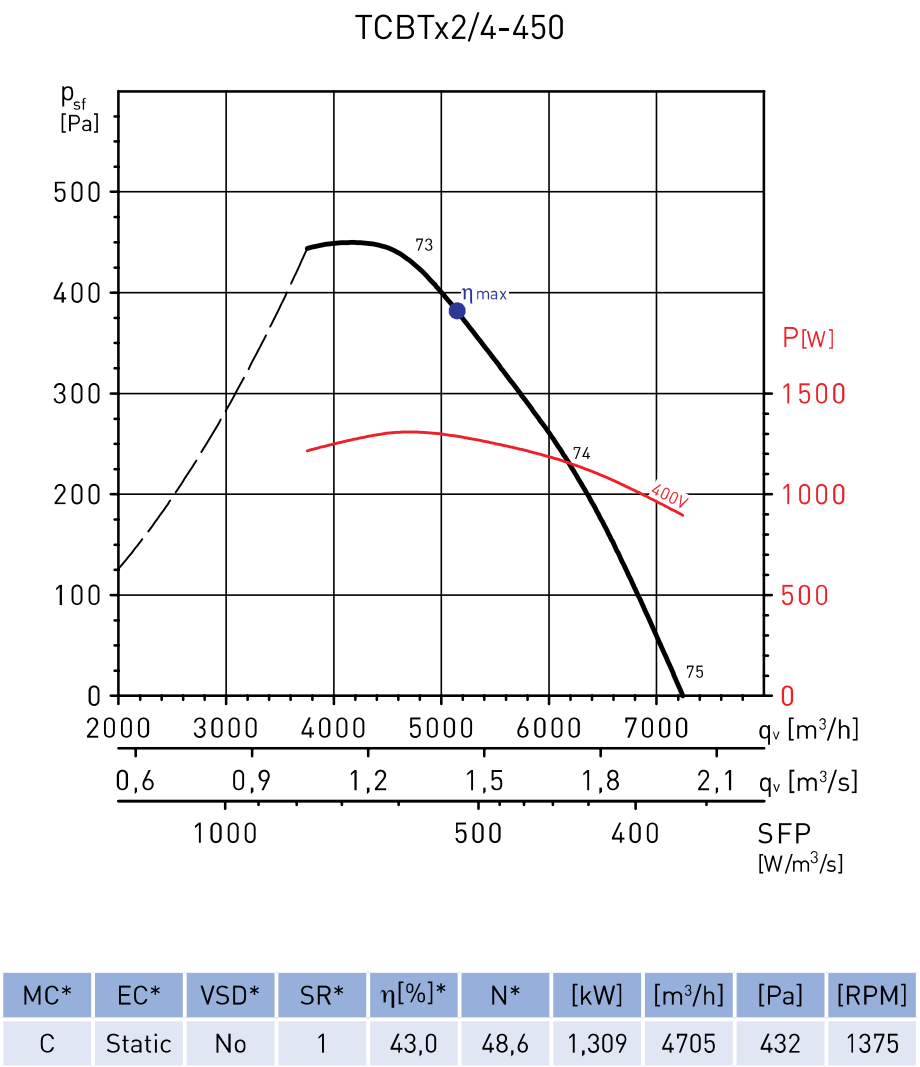
* See example curve.



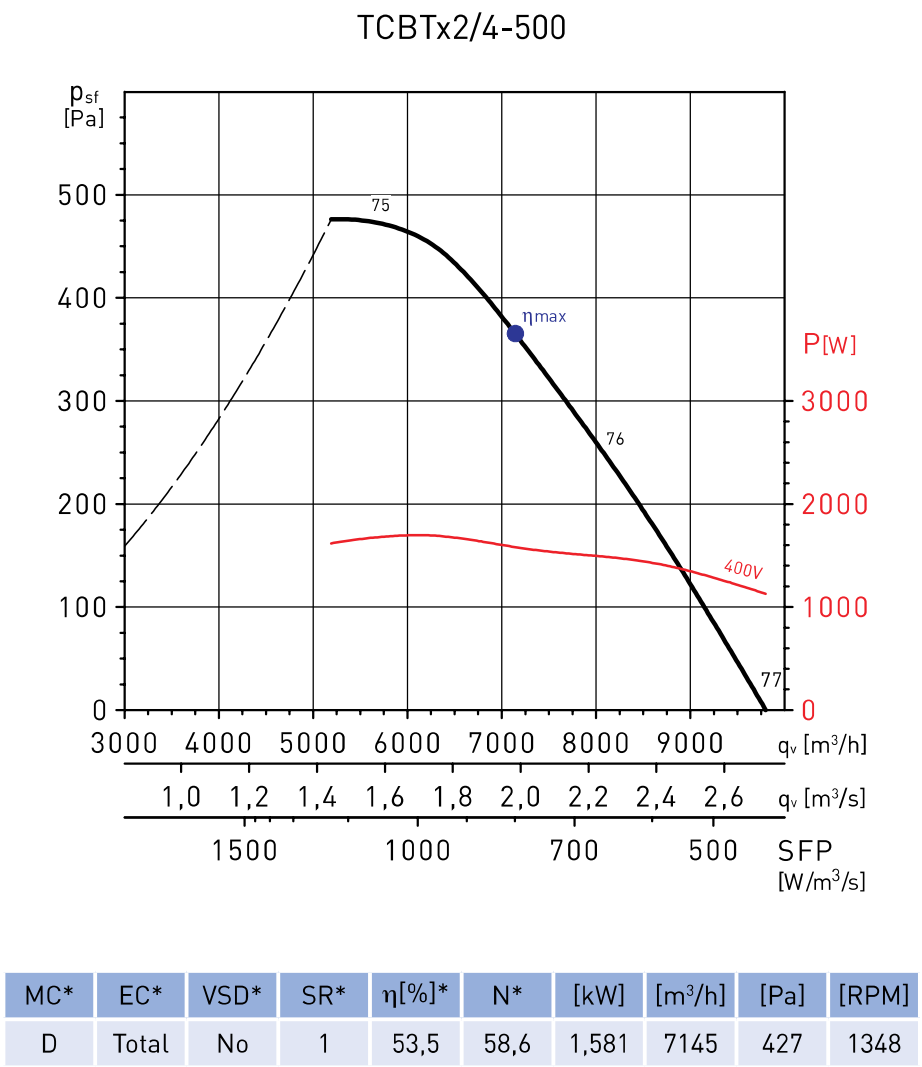
MC*	EC*	VSD*	SR*	η [%]*	N*	[kW]	[m^3/h]	[Pa]	[RPM]
C	Static	No	1	42,4	45,2	3,665	10542	536	1285

* See example curve.

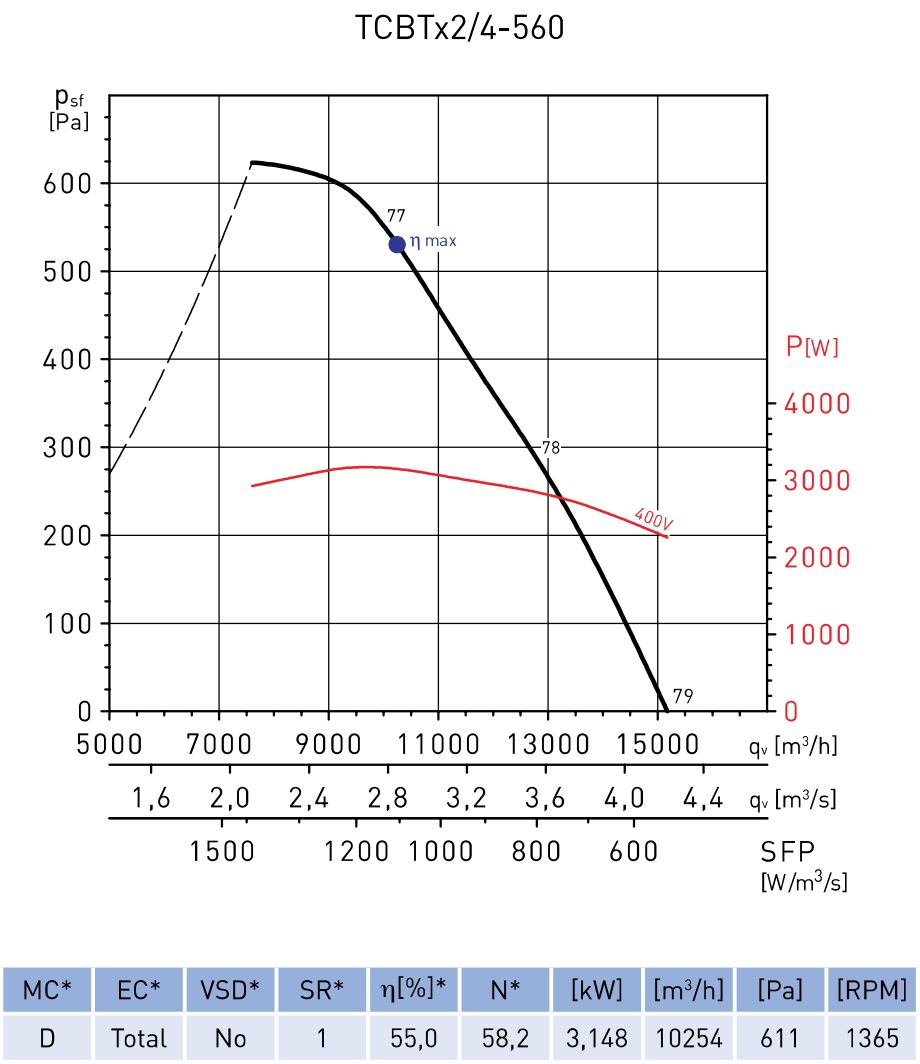
PERFORMANCE CURVES – 4 POLE MOTOR



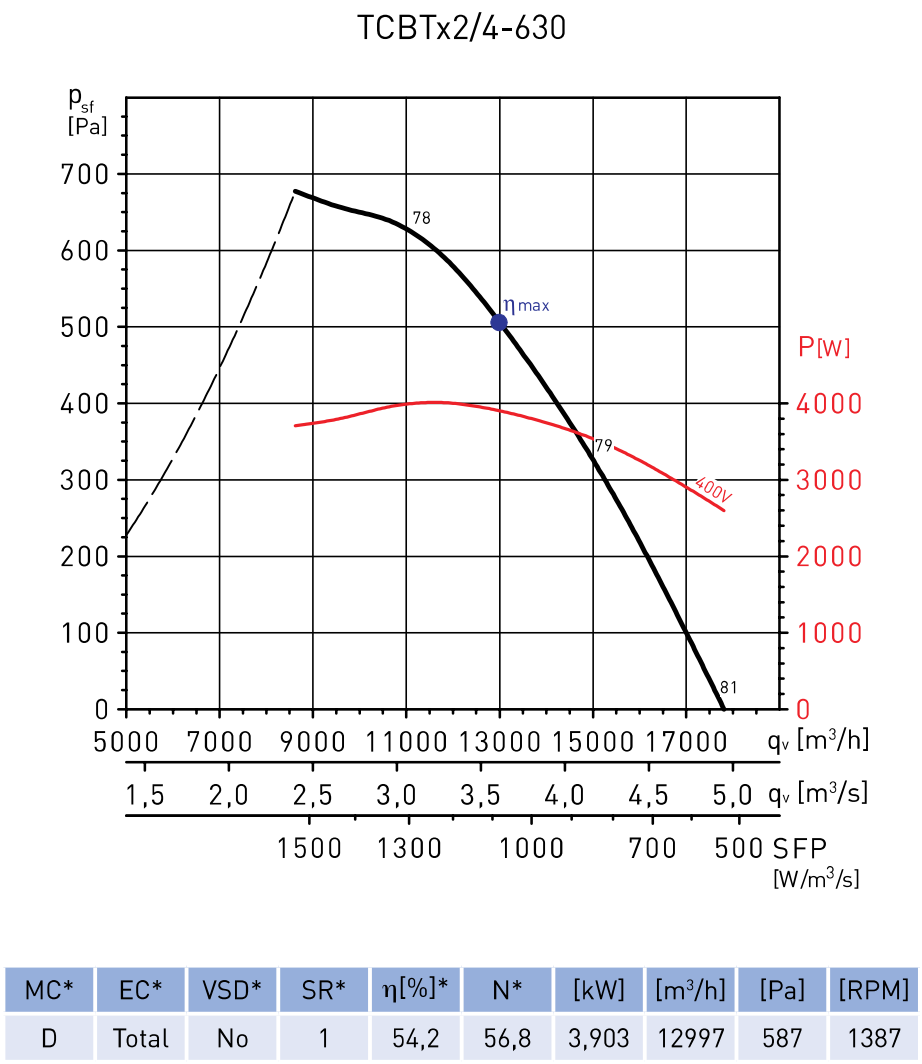
* See example curve.



* See example curve.



* See example curve.



* See example curve.

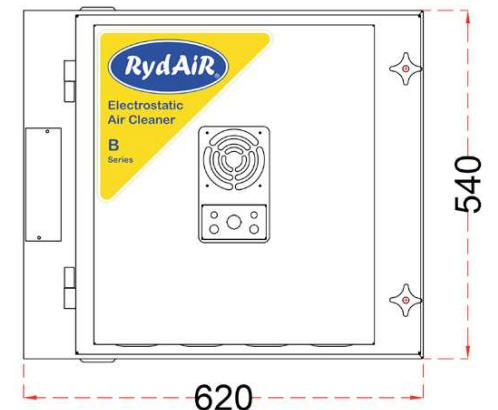


RY 2500B

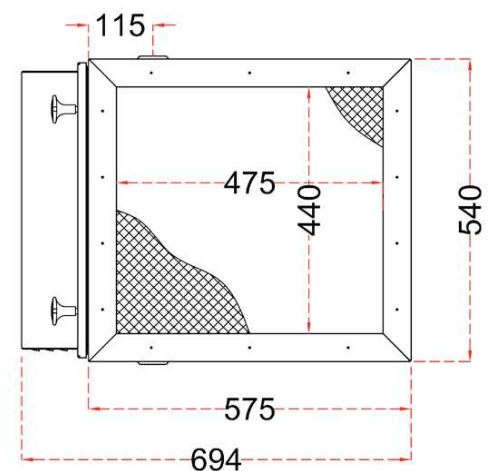
Electrostatic Air Cleaner (Without Blower)



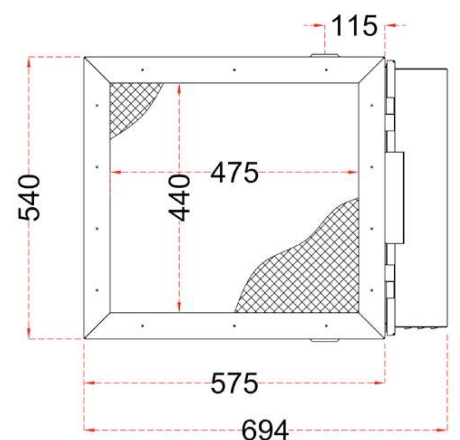
Industrial grade Electrostatic Air Cleaners for collection of dry and wet particulates like dust, oil mist, cooking fumes and various pollutants. Typical application include commercial kitchen exhausts, Air Handling Units (AHUs), factories, workshops, CNC machine shops and many other premises.



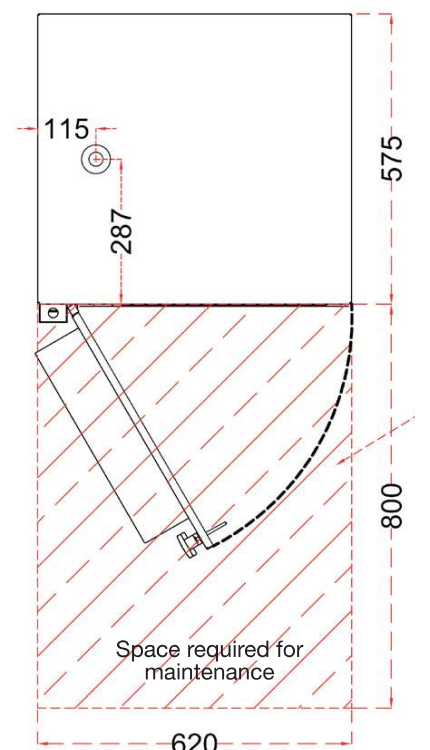
Front View



End View Air Inlet



End View

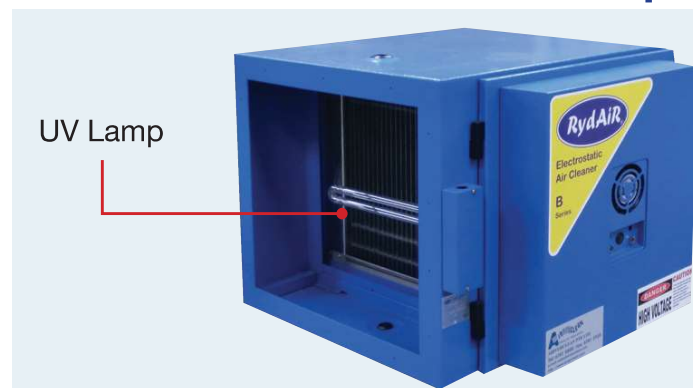


Top View

SPECIFICATIONS

Dimensions/Weight	H: 540 x W: 694 x L: 620 mm / 55Kg
Cabinet	Galvanized Steel, 1.4mm / 16 Gauge
Finishing	Powder Coated, Dark Blue
Air Volume (Rated-Max)#	CFM: 1500-2000max; CMH: 2500-3500max; L/s: 700-970max
Static Pressure	50 pa / 0.2"
Voltage & Power	230 VAC +/-10% , 50/60Hz, 50Watts
Ionising Voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc
Air Flow Direction	Default : Right to Left; Reversible : Left to Right
Power Supply	High Frequency solid state and self regulating design
Features	*Short circuit, arc protection and auto restore power supply *BMS (Building Management System) terminals provided *Auto power cut-off when door is opened *Indicator LEDs for normal or wash indicator *Set of Terminals for remote LED normal or wash indicator
Particle size	From 0.01 microns - 10 microns
Efficiency	DOP Test, up to 95% single pass, up to 99% double pass, calculated. ASHRAE 52.2-2012, up to 96% single pass, up to 99% double pass, calculated. NIOSH 5026 OIL MIST FIELD TEST : UP TO 96%
MERV Ratings	Meets MERV 15 at velocity of 2.5m/s to 3.8m/s
Pre-Filter	Aluminum wire mesh, Washable x 1
Electrostatic Cell	H: 472mm, W: 550mm, L: 340mm
No of Cells / Weight	16.5Kg
No Of Plates per Cell	59
Total Collecting Area	6.07 Sq meters
Post Filter (Optional)	Aluminum Wire Mesh, Washable x 1
Installation	Ceiling Suspended; Wall or Frame Mounted, Multiple Units Stack

RY2500B with UV Ozone Lamp



RY2500B-UV03

ODOUR CONTROL OPTION:

- UV ozone Lamp fitted after electrostatic cell
- Lamp Wattage : 65 Watts
- Ozone output : 6 Grams/Hour
- Lamp Life : 13,000 Hours
- Lamp Operation Blue LEDs on Unit's Panel
- All accessories are contained in RY Unit

LONGAR® Type 3

Low Pressure Baffle Filter



*Stainless steel 240 grit finish - standard handles



*Stainless steel bright annealed finish - optional fixed high temp handles

LONGAR® TYPE 3 FEATURES:

- Low pressure loss
- Polished finish or 240 grit dull grain finish
- Fully welded construction – all stainless steel construction
- Robust construction, our strongest filter yet
- Folding handles and drain holes standard (optional rigid handle available)
- Meets HVCA DWI72 requirements
- Stock Sizes 2-3 days delivery, custom sizes available
- Cutsafe safety edges

APPLICATIONS

- Commercial kitchens
- Water mist separation
- Spark arrestors
- Sand filtration

LONGAR® TYPE 3 BAFFLE FILTER

For use in commercial kitchens and ventilation to extract grease laden air and offer a barrier to flame. The Type 3 has been developed for customers that require a lower pressure baffle filter, it still holds many of the features of the premium Type 2 yet offer a lower resistance to air. The Type 3 is available in standard depths of 20mm and 45mm. Custom sizes available on request. Meets DWI72 and ISO9001.

CONSTRUCTION / MATERIAL SPECIFICATION

As standard all baffles are manufactured with Stainless Steel 430 polished finish and 240 Grit Dull Grain Finish. Maximum Operating temperature 400C or 750F.

FITTING INSTRUCTIONS

- Fit products, handles in direction of air in.
- Product vertical in air stream.

HANDLING

- Handle with care when unpacking.
- Store in dry and frost protected place.

MAINTENANCE

- All maintenance should be carried out in accordance with the planned maintenance set by installation contractor.
- When handling any components suitable PPE should be used - gloves & eye protection and access equipment.
- Filters should be cleaned by a trained operative either daily for heavy use or weekly for light use.
- For more exact guide to cleaning you should contact a cleaning specialist.

PACKAGING

All units are packaged in double wall boxes with separators for standard sizes, glued closed for protection whilst in transit against contamination.

FILTER CLASSIFICATION:

- Filter Class G2.
- UL Class 2.

MANUFACTURED TO:

- DWI72.
- ISO9001.

For technical specifications, part numbers and ordering information, please see overleaf.

LONGAR® Type 3

Low Pressure Baffle Filter

TECHNICAL SPECIFICATIONS

Longar specifies the baffle filter as height x width x thickness. The handles are fixed to the height and drain holes punched on the width. The length of the baffle blade is the height; please ensure correct orientation is given when ordering.

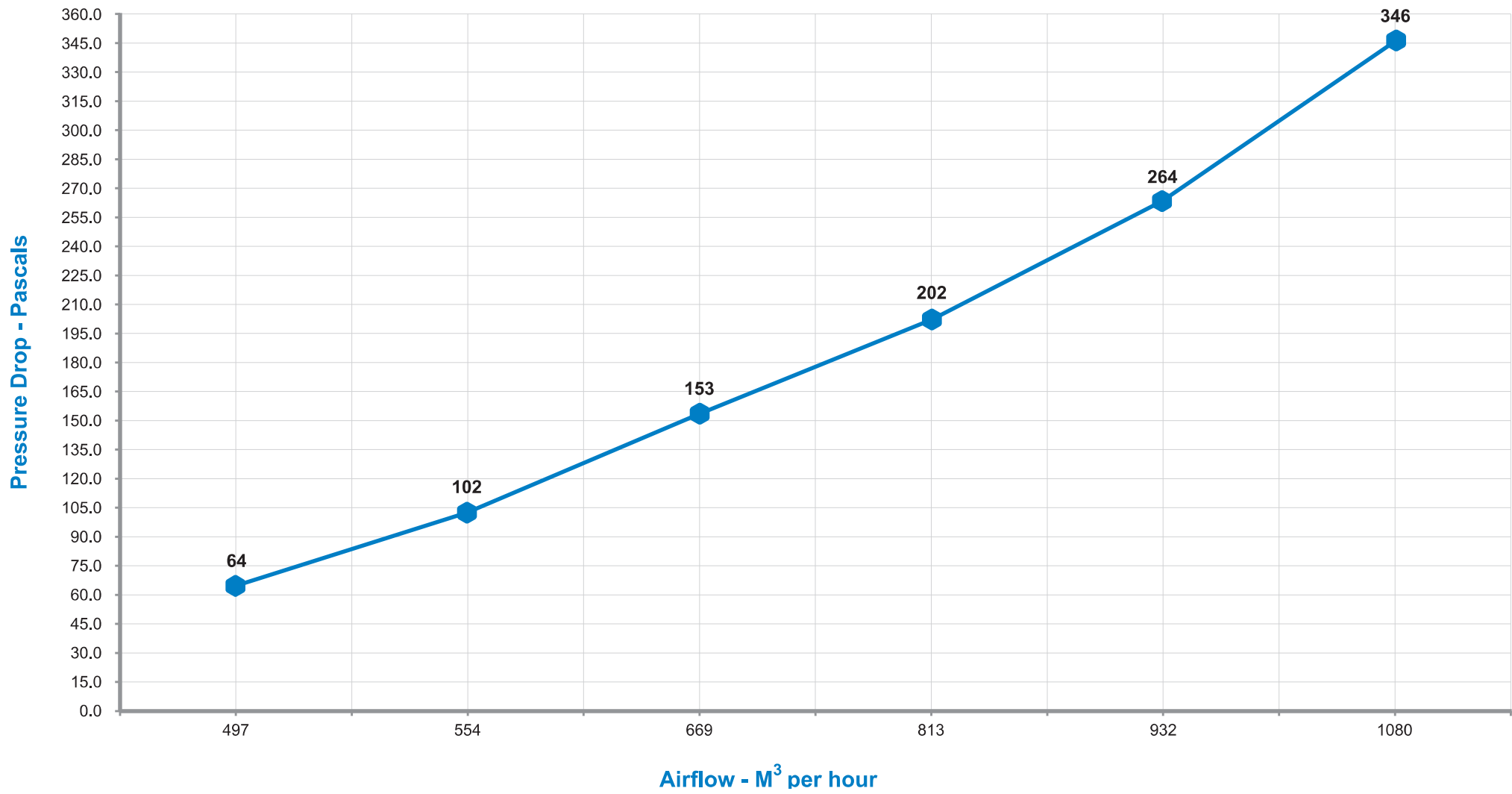
SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)			
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight
TYPE3ST10X20	243 x 496 x 45mm	254 x 508 x 50mm	1.47kgs
	9.57 x 19.53 x 1.77"	10 x 20 x 2"	3.23lbs
TYPE3ST12X20	295 x 496 x 45mm	304 x 508 x 50mm	1.79kgs
	11.61 x 19.53 x 1.77"	12 x 20 x 2"	3.94lbs
TYPE3ST16X16	395 x 395 x 45mm	406 x 406 x 50mm	1.90kgs
	15.55 x 15.55 x 1.77"	16 x 16 x 2"	4.18lbs
TYPE3ST16X20	395 x 496 x 45mm	406 x 508 x 50mm	2.39kgs
	15.55 x 19.53 x 1.77"	16 x 20 x 2"	5.26lbs
TYPE3ST18X18	444 x 444 x 45mm	457 x 457 x 50mm	2.42kgs
	17.48 x 17.48 x 1.77"	18 x 18 x 2"	5.32kgs
TYPE3ST20X16	496 x 395 x 45mm	508 x 406 x 50mm	2.39kgs
	19.53 x 15.55 x 1.77"	20 x 16 x 2"	5.26lbs
TYPE3ST20X20	496 x 496 x 45mm	508 x 508 x 50mm	2.87kgs
	19.53 x 19.53 x 1.77"	20 x 20 x 2"	6.31lbs
TYPE3ST24X24	597 x 597 x 45mm	609 x 609 x 50mm	4.35kgs
	23.50 x 23.50 x 1.77"	24 x 24 x 2"	9.57lbs
FINAL RECOMMENDED PRESSURE DROP: 400 PASCALS			



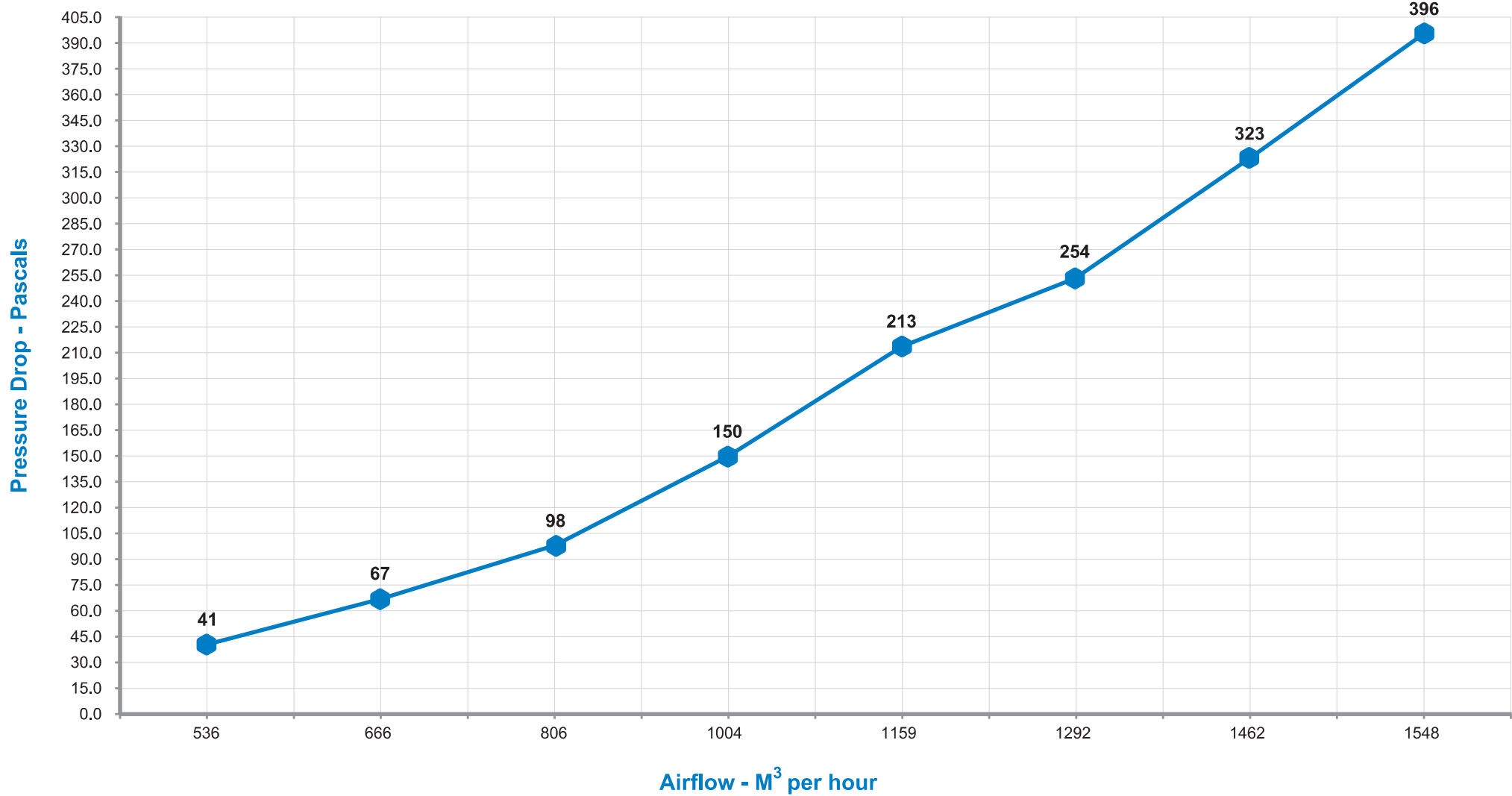
LONGAR INDUSTRIES

FILTERS AND FABRICATIONS FOR A CLEANER ENVIRONMENT

LONGAR® Type 3 - Low PD - Baffle Filter - 243x495x45mm



LONGAR® Type 3 - Low PD - Baffle Filter - 395x395x45mm



LONGAR INDUSTRIES

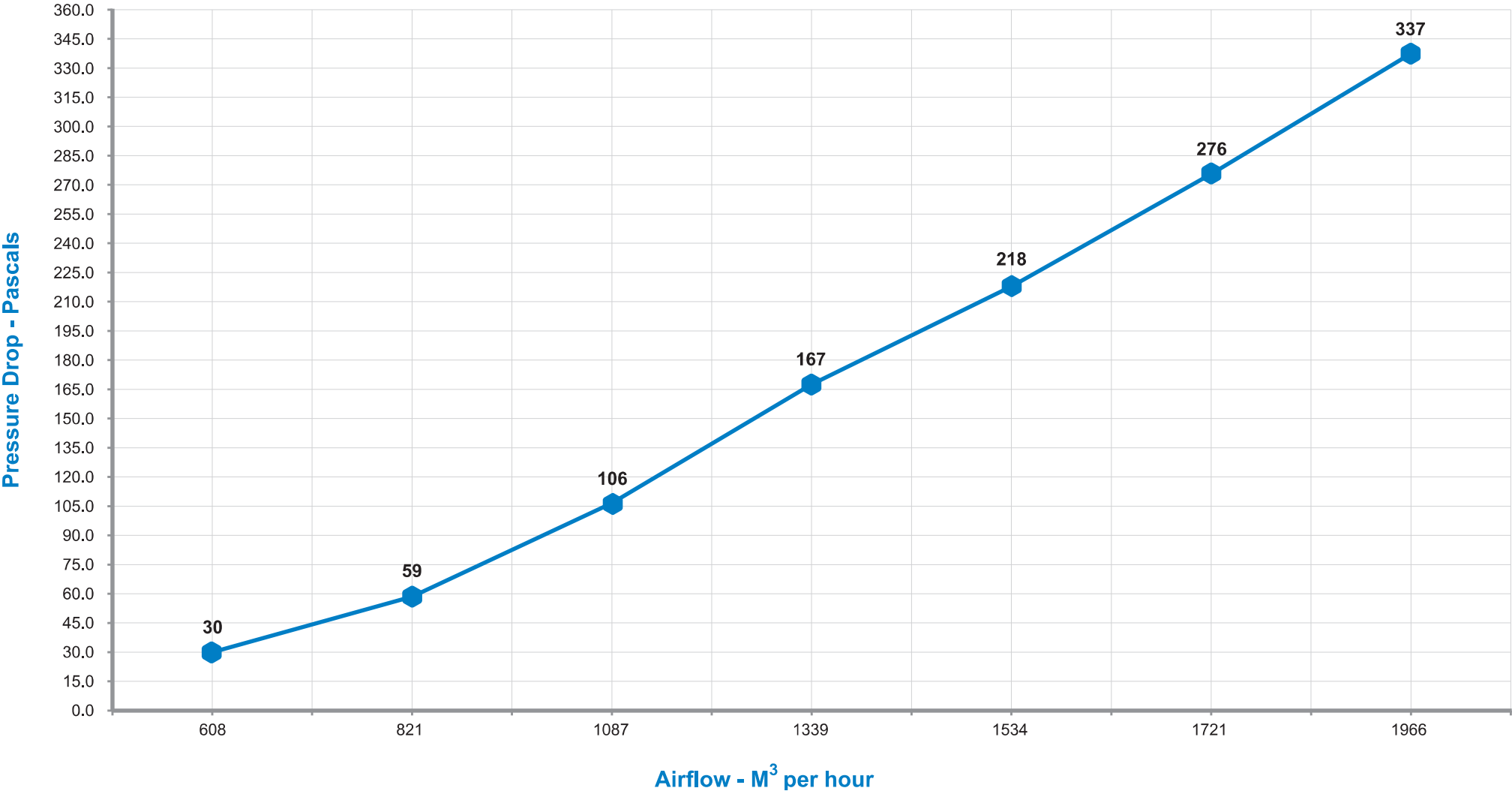
FILTERS AND FABRICATIONS FOR A CLEANER ENVIRONMENT

Longar Industries Limited, Unit 25, Glenmore Business Park, Colebrook Way Weyhill Road, Andover, Hampshire SP10 3GZ United Kingdom

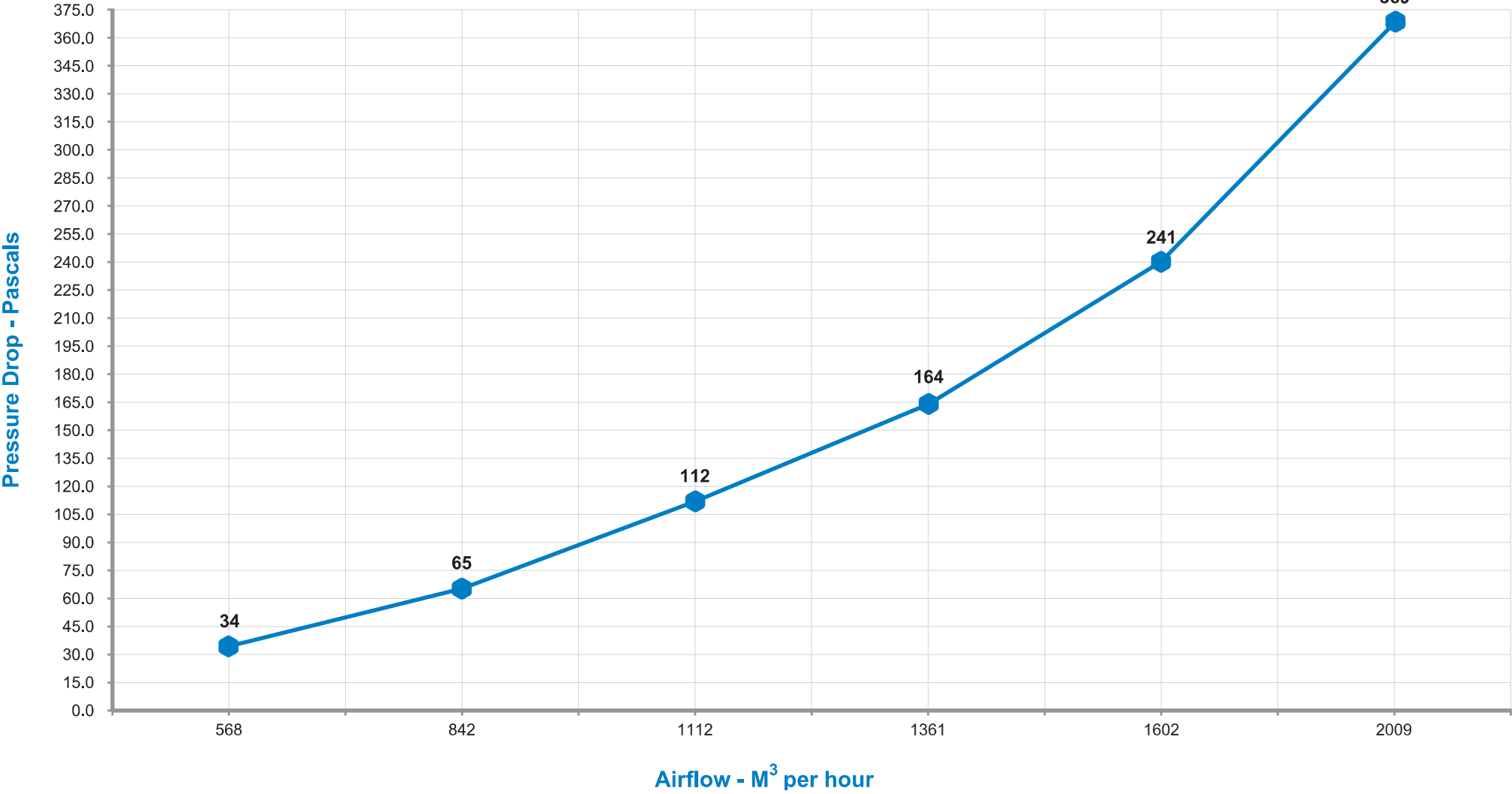
T +44 (0)1264 332 993 F +44 (0)1264 332 994 E info@longarind.com W www.longarind.com

As part of our program for continuous improvement, Longar Ltd reserves the right to change specifications without notice. 15-01-2016.

LONGAR® Type 3 - Low PD - Baffle Filter - 395x496x45mm



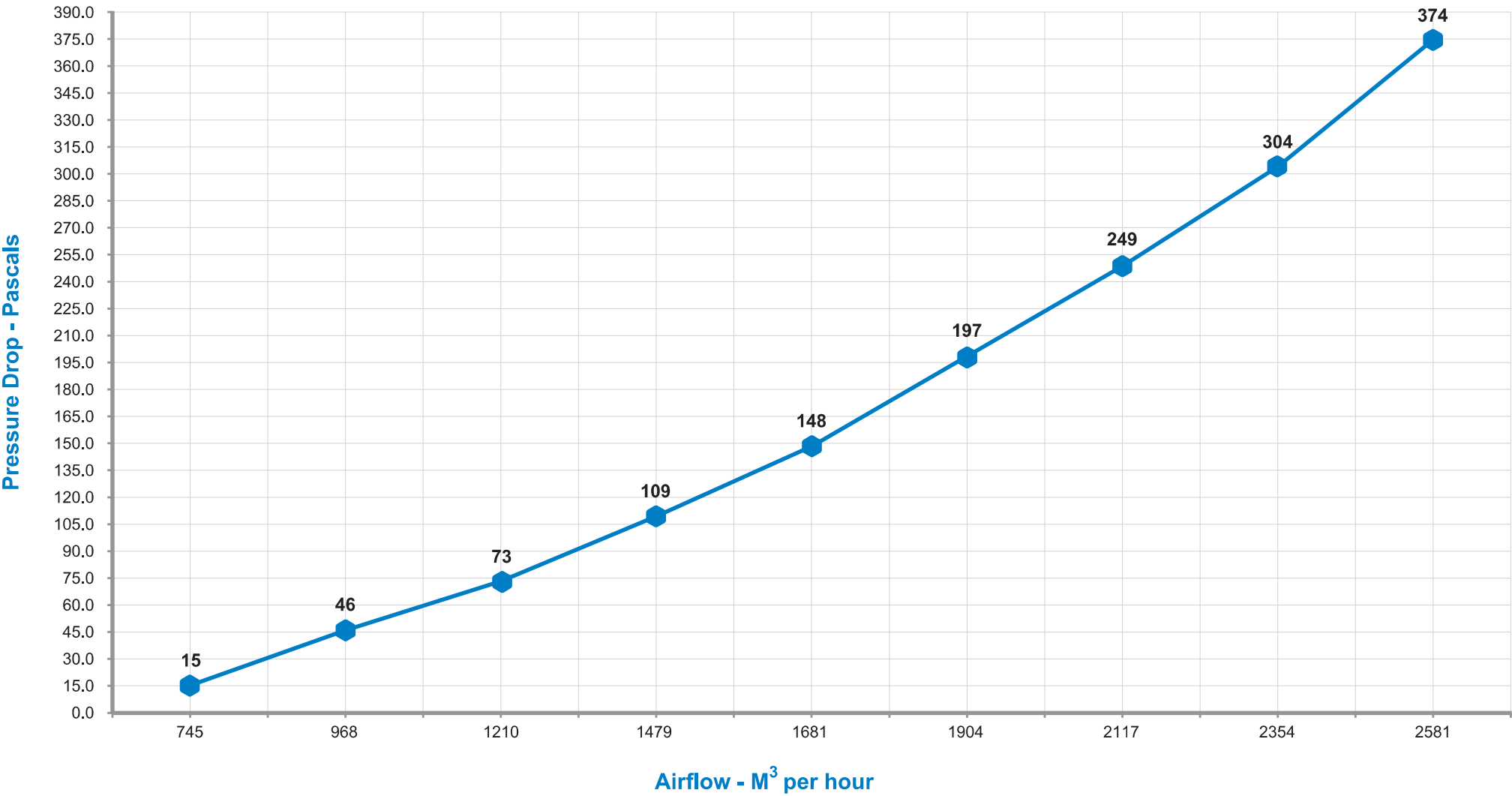
LONGAR® Type 3 - Low PD - Baffle Filters - 444x444x45mm



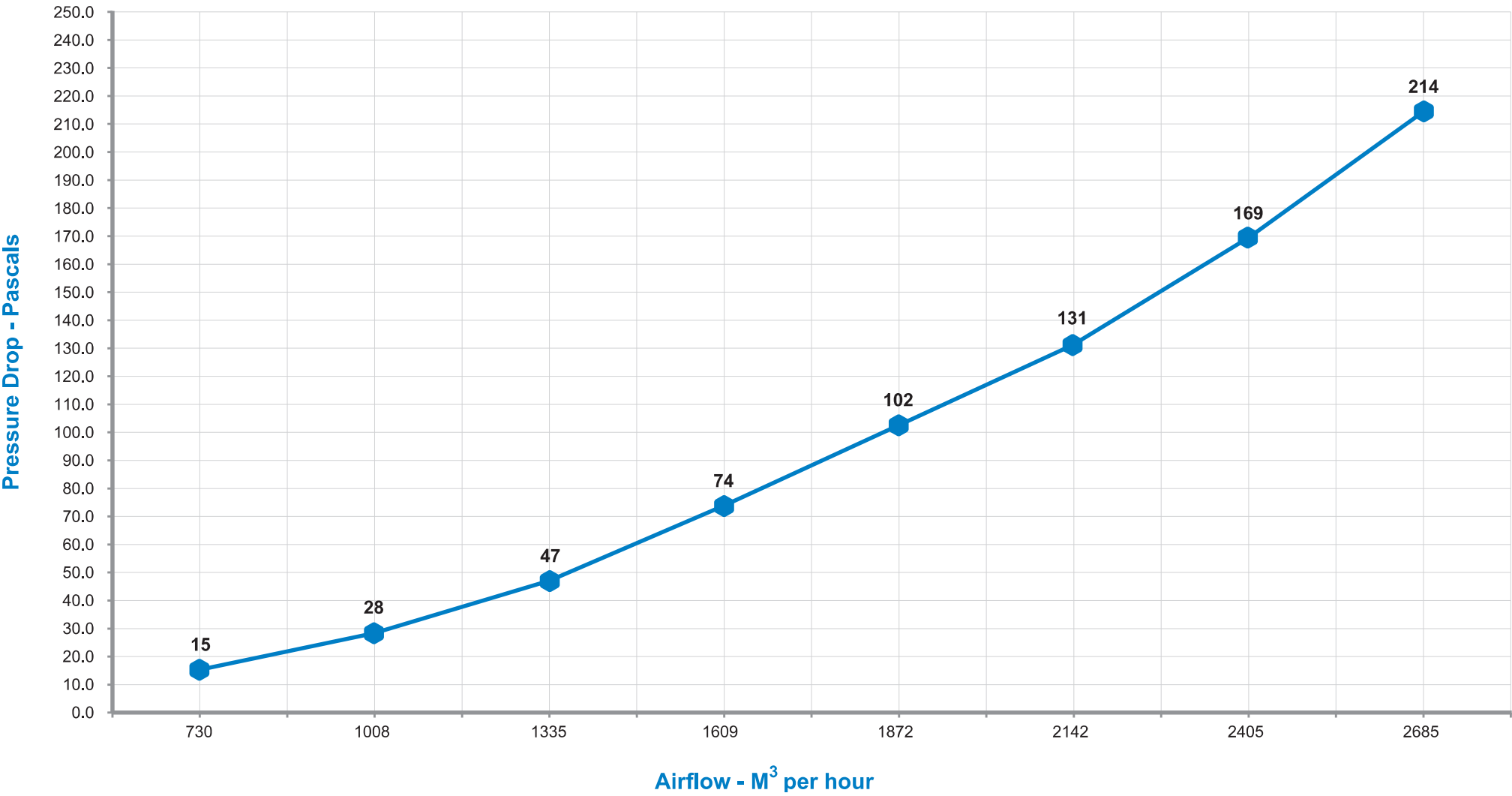
LONGAR INDUSTRIES

FILTERS AND FABRICATIONS FOR A CLEANER ENVIRONMENT

LONGAR® Type 3 - Low PD - Baffle Filters - 496x496x45mm



LONGAR® Type 3 - Low PD - Baffle Filters - 597x597x45mm



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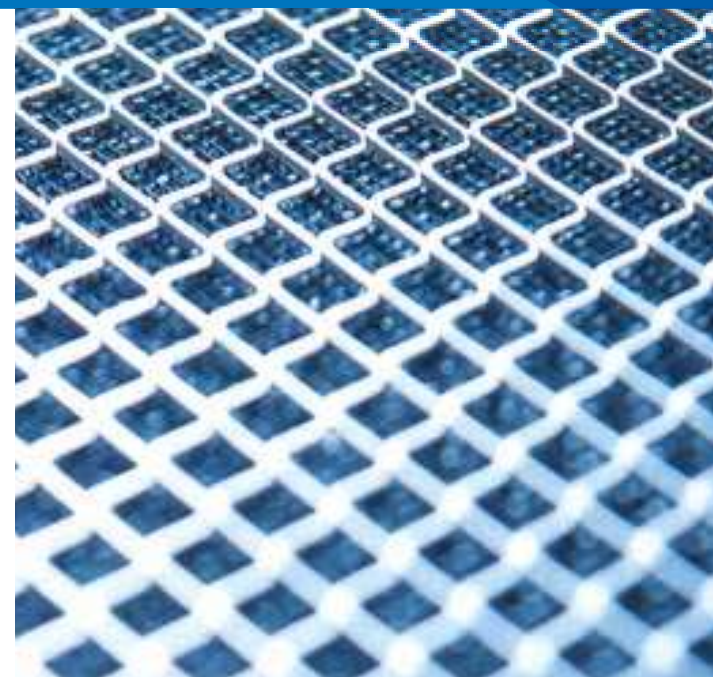
FILTERS AND FABRICATIONS FOR A CLEANER ENVIRONMENT

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LONGAR® Type 4 Mesh Filter



LONGAR® TYPE 4 FEATURES:

- The LONGAR® Type 4 Mesh filter is manufactured using a patented expanded mesh, this offers a unique design based on many years of R&D. This results in a mesh that delivers greater air or grease arrestance, integral strength and low pressure loss.
- Comes with a safety edge channel to offer greater strength and safety over conventional products available on the market place.
- Using an Expanded metal multi-layer pad we are able to offer a panel with greater rigidity and importantly the pad cannot migrate particles, which can be found in 'knit mesh' filters, these types of panels can be hazardous where strands can break away from the filter.
- Due to the nature of the material that we use, its integral strength means when it comes to cleaning it will stand up well, and outlast panels of lesser constructions.
- Tested to Eurovent 4/5.
- Handles and drain holes are available.
- Available in Galvanised Steel, Stainless Steel and Aluminium.

APPLICATIONS

- Primary air filtration G2/G3
- Kitchens
- Cooker hoods
- All types of grease extraction
- General heating and ventilation pre-filtration

LONGAR® TYPE 4 MESH FILTER

The LONGAR® Type 4 Mesh filter is the result of years of experience in the manufacture and development of filters for the HEVAC world. With over 40 years of manufacturing experience the products brought to the market place today are clearly world class in price and product.

The LONGAR® Type 4 is a superior grease filter, available in a large selection of sizes and materials options.

Our Mesh filters are of robust construction and are used for a variety of applications, grease and air or dust collection applications, coalescer and spark arrestance, ideal as a prefilter for large particle contaminants and widely used in high air volume applications.

CONSTRUCTION DETAILS / MATERIAL SPECIFICATION

Media: Expanded metal patented design to aid filtration, available in stainless steel, galvanised steel, and aluminium.

Frame: U shaped section supplied with safety edge, available in stainless steel, galvanised steel and aluminium.

Filter thickness: Filter panels are available in actual thicknesses of: 8,10,12,20,25,40,45,50 and 95mm. Other sizes available on request.

Support mesh: Our own Q14 mesh is used in the grease filter as the support mesh.

Handles and drain holes: Folding handles and drain holes can be supplied as an option when required. They are fitted by default to the short dimension, unless otherwise stated by the customer at the time of ordering.

Housings: We can supply front withdrawal housings where required, see separate data sheet.

For technical specifications, part numbers and ordering information, please see overleaf.

LONGAR® Type 4

Mesh Filter

FITTING INSTRUCTIONS

- Fit products, handles in direction of air in.
- Product vertical in air stream.
- Drain holes lower edge to exit into drip tray if installed.

HANDLING

- Handle with care when unpacking.
- Store in dry and frost protected place.

MAINTENANCE

- All maintenance should be carried out in accordance with the planned maintenance set by installation contractor.
- When handling any components suitable PPE should be used - gloves, eye protection and access equipment.
- Filters should be cleaned by a trained operative either daily for heavy use or weekly for light use.
- For more exact guide to cleaning you should contact a cleaning specialist.

PACKAGING

All units are packaged in double wall boxes with separators for standard sizes, glued closed for protection whilst in transit against contamination.

TECHNICAL SPECIFICATIONS

Tested to Eurovent 4/5
Fire rating = UL Class 2
100% relative humidity

Longar specifies the Grease Filter as height x width x thickness. The handles are fixed to the height and drain holes punched on the width.
Please ensure correct orientation is given when ordering.

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)			
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight
ALIGLV49524145	241 x 495 x 45mm	254 x 508 x 50mm	1.58kgs
	9.49 x 19.49 x 1.77"	10 x 20 x 2"	3.48lbs
ALIGLV39439445	394 x 394 x 45mm	406 x 406 x 50mm	1.90kgs
	15.51 x 15.51 x 1.77"	16 x 16 x 2"	4.18lbs
ALIGLV49539445	394 x 495 x 45mm	406 x 508 x 50mm	2.39kgs
	15.51 x 19.49 x 1.77"	16 x 20 x 2"	5.26lbs
ALIGLV44444445	444 x 444 x 45mm	457 x 457 x 50mm	2.43kgs
	17.48 x 17.48 x 1.77"	18 x 18 x 2"	5.35lbs
ALIGLV49549545	495 x 495 x 45mm	508 x 508 x 50mm	2.92kgs
	19.49 x 19.49 x 1.77"	20 x 20 x 2"	6.42lbs
ALIGLV59759745	597 x 597 x 45mm	609 x 609 x 50mm	3.90kgs
	23.50 x 23.50 x 1.77"	24 x 24 x 2"	8.58lbs
FINAL RECOMMENDED PRESSURE DROP: 200 PASCALS			

Pressure drop and airflow information available on request.



LONGAR INDUSTRIES

FILTERS AND FABRICATIONS FOR A CLEANER ENVIRONMENT

LONGAR® Type II

Pleated Panel Filters



LONGAR® TYPE II FEATURES:

- Moisture resistant cardboard frame.
- G4 efficiency to provide a good base level of filtration.
- Fully supported media bonded to expanded mesh grid.
- The filtering media is bonded to the case to eliminate air by-pass.
- Strong, robust construction.
- Extended surface area.
- High dust holding capacity.
- Dimensions of product are part marked into frame for positive ID.

APPLICATIONS

- Hotels
- Offices
- Food production
- Air conditioning
- Hospitals
- Pre-filtration asbestos removal

LONGAR® TYPE II PLEATED PANEL FILTER

Used in a variety of HEVAC applications where higher level air cleanliness is needed over the standard pre filters. Glass media is unacceptable in food and pharmaceutical industries and in some hospital areas. Especially useful where the installation requires a combination of high arrestance coupled with control over smaller particles. The high capacity version is selected when space is at a premium; filter sizes match the rated capacities of bag filters.

CONSTRUCTION / MATERIAL SPECIFICATIONS

The LONGAR® Type II is manufactured with pleated synthetic media, and an expanded diamond grid with 97% open area. The casing is constructed from a heavy duty rigid water resistant card, with support members along the diagonals. The media is bonded to the support grid and the frame in order to avoid the possibility of air bypass. The case is designed for minimum resistance and maximum free area, the case is also crease formed to stop moisture ingress. The product can be manufactured in a variety of depths from 22mm to 97mm deep. Optional metal frame available as shown above.

22mm (1") Filters are 9 Pleats per 300mm (1ft)
47mm (2") Filters are 9 Pleats per 300mm (1ft)
97mm (4") Filters are 9 Pleats per 300mm (1ft)

TYPE II HIGH CAPACITY PLEATED PANEL

We are able to manufacture the Type II with increased filter media over the standard product, for situations where an increase in air volume is required.

22mm (1") Filters are 12 Pleats per 300mm (1ft)
47mm (2") Filters are 12 Pleats per 300mm (1ft)
97mm (4") Filters are 12 Pleats per 300mm (1ft)

TYPE II HIGH EFFICIENCY PLEATED PANEL

Where situations arise we manufacture the Type II with a higher grade of filter media, F6, F7, F8 are available.

LONGAR® TYPE II IMPREGNATED CARBON PLEATED PANELS

For less demanding situations the use of impregnated media can be considered. They utilise non-woven synthetic media, which is then impregnated with activated carbon. They offer an alternative to our granular carbon systems however they cannot offer either the life span or dwell time that can be found with the rest of the range.

For technical specifications, part numbers and ordering information, please see overleaf.

LONGAR® Type II

Pleated Panel Filters

FITTING INSTRUCTIONS

- Fit products, observe direction of airflow indicator

HANDLING

- Handle with care when unpacking.
- Store in dry and frost protected place.

MAINTENANCE

- All maintenance and replacement schedules will be set by the original equipment installer. Please refer to this for more information.
- When handling any components suitable PPE should be used – gloves, eye protection and access equipment should be used where required.
- Filters should not be cleaned but replaced when required in accordance with maintenance schedule set by the installation contractor.

PACKAGING

All units are packaged in double wall boxes, glued closed for protection whilst in transit against contamination.

TECHNICAL SPECIFICATIONS

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)				
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Available Efficiencies *
PPF24824822	248 x 248 x 22mm	254 x 254 x 25mm	0.07kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	9.76 x 9.76 x 0.87"	10 x 10 x 1"	0.15lbs	
PPF49624822	496 x 248 x 22mm	508 x 254 x 25mm	0.14kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 9.76 x 0.87"	20 x 10 x 1"	0.31lbs	
PPF29329322	293 x 293 x 22mm	304 x 304 x 25mm	0.09kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	11.54 x 11.54 x 0.87"	12 x 12 x 1"	0.21lbs	
PPF59429422	594 x 294 x 22mm	609 x 304 x 25mm	0.19kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.39 x 11.57 x 0.87"	24 x 12 x 1"	0.41lbs	
PPF37537522	375 x 375 x 22mm	381 x 381 x 25mm	0.15kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	14.76 x 14.76 x 0.87"	15 x 15 x 1"	0.34lbs	
PPF49637522	496 x 375 x 22mm	508 x 381 x 25mm	0.19kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 14.76 x 0.87"	20 x 15 x 1"	0.41lbs	
PPF49639622	496 x 396 x 22mm	508 x 406 x 25mm	0.20kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 15.59 x 0.87"	20 x 16 x 1"	0.43lbs	
PPF62039622	620 x 396 x 22mm	635 x 406 x 25mm	0.24kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 15.59 x 0.87"	25 x 16 x 1"	0.53lbs	
PPF44844822	448 x 448 x 22mm	457 x 457 x 25mm	0.19kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	17.64 x 17.64 x 0.87"	18 x 18 x 1"	0.42lbs	
PPF49649622	496 x 496 x 22mm	508 x 508 x 25mm	0.24kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 19.53 x 0.87"	20 x 20 x 1"	0.52lbs	
PPF59649622	596 x 496 x22mm	609 x 508 25mm	0.27kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 19.53 x 0.87"	24 x 20 x 1"	0.60lbs	
PPF62049622	620 x 496 x 22mm	635 x 508 x 25mm	0.28kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 19.53 x 0.87"	25 x 20 x 1"	0.63lbs	
PPF59659622	596 x 596 x 22mm	609 x 609 x 25mm	0.31kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 23.46 x 0.87"	24 x 24 x 1"	0.68lbs	
PPF24824847	248 x 248 x 47mm	254 x 254 x 50mm	0.12kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	9.76 x 9.76 x 1.85"	10 x 10 x 2"	0.26lbs	

Pressure drop and airflow information available on request.

LONGAR® Type II

Pleated Panel Filters

TECHNICAL SPECIFICATIONS

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)				
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Available Efficiencies *
PPF49724347	497 x 243 x 47mm	508 x 254 x 50mm	0.21kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.57 x 9.57 x 1.85"	20 x 10 x 2"	0.45lbs	
PPF29329347	293 x 293 x 47mm	304 x 304 x 50mm	0.15kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	11.54 x 11.54 x 1.85"	12 x 12 x 2"	0.33lbs	
PPF59628947	596 x 289 x 47mm	609 x 304 x 50mm	0.28kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 11.38 x 1.85"	24 x 12 x 2"	0.61lbs	
PPF37237247	372 x 372 x 47mm	381 x 381 x 50mm	0.22kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	14.65 x 14.65 x 1.85"	15 x 15 x 2"	0.48lbs	
PPF39439447	394 x 394 x 47mm	406 x 406 x 50mm	0.25kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	15.51 x 15.51 x 1.85"	16 x 16 x 2"	0.54lbs	
PPF49637547	496 x 375 x 47mm	508 x 381 x 50mm	0.27kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 14.76 x 1.85"	20 x 15 x 2"	0.60lbs	
PPF49639647	496 x 396 x 47mm	508 x 406 x 50mm	0.29kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 15.59 x 1.85"	20 x 16 x 2"	0.63lbs	
PPF62039647	620 x 396 x 47mm	635 x 406 x 50mm	0.34kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 15.59 x 1.85"	25 x 16 x 2"	0.75lbs	
PPF44644647	446 x 446 x 47mm	457 x 457 x 50mm	0.28kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	17.56 x 17.56 x 1.85"	18 x 18 x 2"	0.61lbs	
PPF49649647	496 x 496 x 47mm	508 x 508 x 50mm	0.34kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 19.53 x 1.85"	20 x 20 x 2"	0.75lbs	
PPF59639647	596 x 396 x 47mm	609 x 406 x 50mm	0.33kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 15.59 x 1.85"	24 x 16 x 2"	0.73lbs	
PPF59649647	596 x 496 x 47mm	609 x 508 x 50mm	0.39kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 19.53 x 1.85"	24 x 20 x 2"	0.87lbs	
PPF62049647	620 x 496 x 47mm	635 x 508 x 50mm	0.39kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 19.53 x 1.85"	25 x 20 x 2"	0.87lbs	
PPF59659647	596 x 596 x 47mm	609 x 609 x 50mm	0.47kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 23.46 x 1.85"	24 x 24 x 2"	1.02lbs	
PPF24824897	248 x 248 x 97mm	254 x 254 x 102mm	0.22kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	9.76 x 9.76 x 3.82"	10 x 10 x 4"	0.49lbs	
PPF49624897	496 x 248 x 97mm	508 x 254 x 102mm	0.38kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 9.76 x 3.82"	20 x 10 x 4"	0.84lbs	
PPF29329397	293 x 293 x 97mm	304 x 304 x 102mm	0.28kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	11.54 x 11.54 x 3.82"	12 x 12 x 4"	0.61lbs	
PPF59728997	597 x 289 x 97mm	609 x 304 x 102mm	0.48kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.50 x 11.38 x 3.82"	24 x 12 x 4"	1.06lbs	

Pressure drop and airflow information available on request.

LONGAR® Type II

Pleated Panel Filters

TECHNICAL SPECIFICATIONS

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)				
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Available Efficiencies *
PPF37537597	375 x 375 x 97mm	381 x 381 x 102mm	0.41kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	14.76 x 14.76 x 3.82"	15 x 15 x 4"	0.90lbs	
PPF39639697	396 x 396 x 97mm	406 x 406 x 102mm	0.44kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	15.59 x 15.59 x 3.82"	16 x 16 x 4"	0.97lbs	
PPF49637597	496 x 375 x 97mm	508 x 381 x 102mm	0.49kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 14.76 x 3.82"	20 x 15 x 4"	1.08lbs	
PPF49639697	496 x 396 x 97mm	508 x 406 x 102mm	0.52kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 15.59 x 3.82"	20 x 16 x 4"	1.15lbs	
PPF62039697	620 x 396 x 97mm	635 x 406 x 102mm	0.61kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 15.59 x 3.82"	25 x 16 x 4"	1.33lbs	
PPF44644697	446 x 446 x 97mm	457 x 457 x 102mm	0.52kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	17.56 x 17.56 x 3.82"	18 x 18 x 4"	1.14lbs	
PPF49649697	496 x 496 x 97mm	508 x 508 x 102mm	0.66kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 19.53 x 3.82"	20 x 20 x 4"	1.46lbs	
PPF59639697	596 x 396 x 97mm	609 x 406 x 102mm	0.59kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 15.59 x 3.82"	24 x 16 x 4"	1.29lbs	
PPF59649697	596 x 496 x 97mm	609 x 508 x 102mm	0.69kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 19.53 x 3.82"	24 x 20 x 4"	1.52lbs	
PPF62049697	620 x 496 x 97mm	635 x 508 x 102mm	0.71kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 19.53 x 3.82"	25 x 20 x 4"	1.56lbs	
PPF59659697	596 x 596 x 97mm	609 x 609 x 102mm	0.79kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 23.46 x 3.82"	24 x 24 x 4"	1.74lbs	
FINAL RECOMMENDED PRESSURE LOSS: 250 PASCALS				

Pressure drop and airflow information available on request.

- *Efficiency required to be confirmed at a time of ordering.



LONGAR INDUSTRIES

FILTERS AND FABRICATIONS FOR A CLEANER ENVIRONMENT

Circular duct

SR



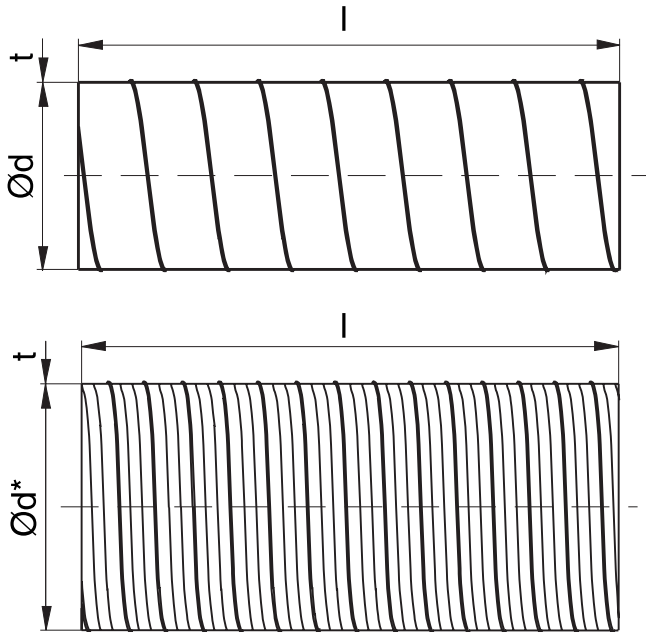
Description

Circular duct.

Ducts are always produced locally and can therefore have different thicknesses and other specifications per country.

The ducts can be produced both with and without click function (notches). Please specify when ordering.

Dimensions



Ød std nom	O πd m	A πd²/4 m²	t std [mm]	l std [mm]	ml std kg/m
63	0,198	0,003	0,5	3000	0,89
80	0,251	0,005	0,45	3000	0,91
100	0,314	0,008	0,45	3000	1,14
112	0,352	0,010	0,5	3000	1,42
125	0,393	0,012	0,45	3000	1,41
140	0,440	0,015	0,5	3000	1,76
150	0,471	0,018	0,5	3000	1,89
160	0,503	0,020	0,5	3000	2,02
180	0,565	0,025	0,5	3000	2,26
200	0,628	0,031	0,5	3000	2,56
224	0,704	0,039	0,6	3000	3,42
250 *	0,785	0,049	0,5	3000	3,18
280	0,880	0,062	0,55	3000	3,92
300 *	0,942	0,071	0,55	3000	4,20
315 *	0,990	0,078	0,55	3000	4,41
355 *	1,115	0,099	0,55	3000	4,96
400 *	1,257	0,126	0,55	3000	6,01
450 *	1,414	0,159	0,7	3000	8,60
500 *	1,571	0,196	0,7	3000	9,54
560 *	1,759	0,246	0,8	3000	12,2
600 *	1,885	0,283	0,7	3000	13,1
630 *	1,979	0,312	0,7	3000	12,0
710 *	2,231	0,396	0,8	3000	15,5
800 *	2,513	0,503	0,8	3000	17,4
900 *	2,827	0,636	0,9	3000	21,7
1000 *	3,142	0,785	0,9	3000	24,1
1120 *	3,519	0,985	0,9	3000	27,0
1250 *	3,927	1,227	0,9	3000	30,2
1400 *	4,398	1,539	1,25	2400	48,0
1500 *	4,712	1,767	1,25	2400	51,4
1600 *	5,027	2,011	1,25	2400	54,8

* With outturned stiffening corrugation.

Ordering example

SR2003000CLIC

Product

Dimension Ød

Length l

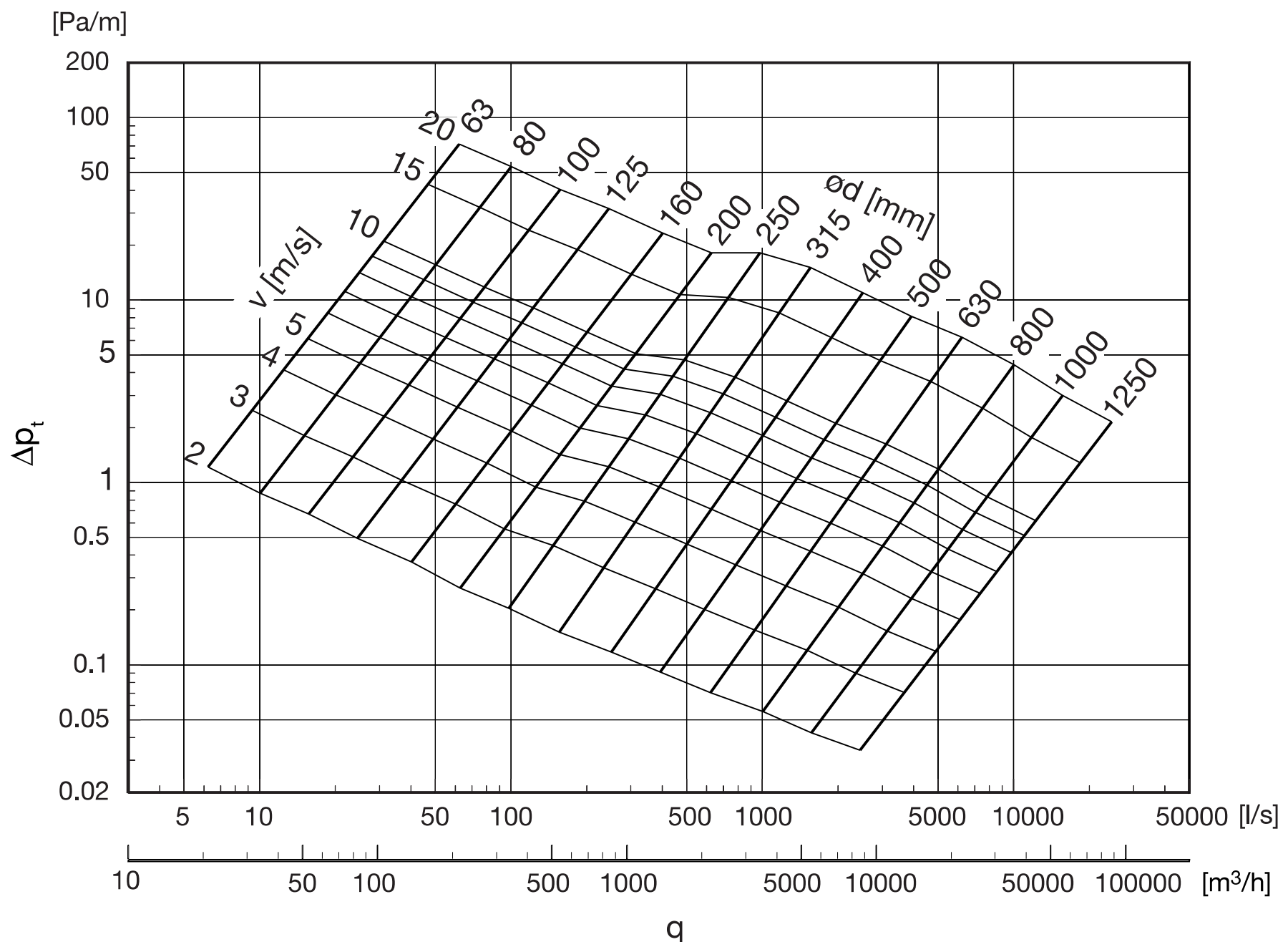
Type



Circular duct

SR

Technical data



Special versions

We can supply ducts with the following special designs:

- In intermediate dimensions, see page 15.
- Extra tight, with nitrile rubber seal in the lock seam
- In other sheet metal thicknesses

Extra tight, with seam seal

When extremely good sealing is required in the spiral seam, the ducts can also be supplied with a special rubber seal in the seam.

This seal is very effective at stopping leakage of vegetable oils and greases, and most petroleum products including white spirit.

Other sheet metal thicknesses

If extra stability is needed in ducts, because of high negative pressure etc., they can be supplied with thicker sheet metal than standard. Remember that the thickness increase always reduces the inner diameter. Fittings for such special ducts must be specified separately and sometimes have to be made specially.

Reinforcement corrugations

Ducts of $\phi 250$ mm and above are normally given stiffening corrugations to increase radial stiffness.

Circular duct

SR

Technical data

Strength

Positive pressure

in case of high positive pressure, the seal moulding lips will first start to whistle. At considerably higher pressure, the joints between the ducts will be forced apart. If you manage to fix the connections very well, the ducts will burst at their seams at even higher pressure. The high pressures needed for this to happen are not relevant to ventilation installations.

Negative pressure

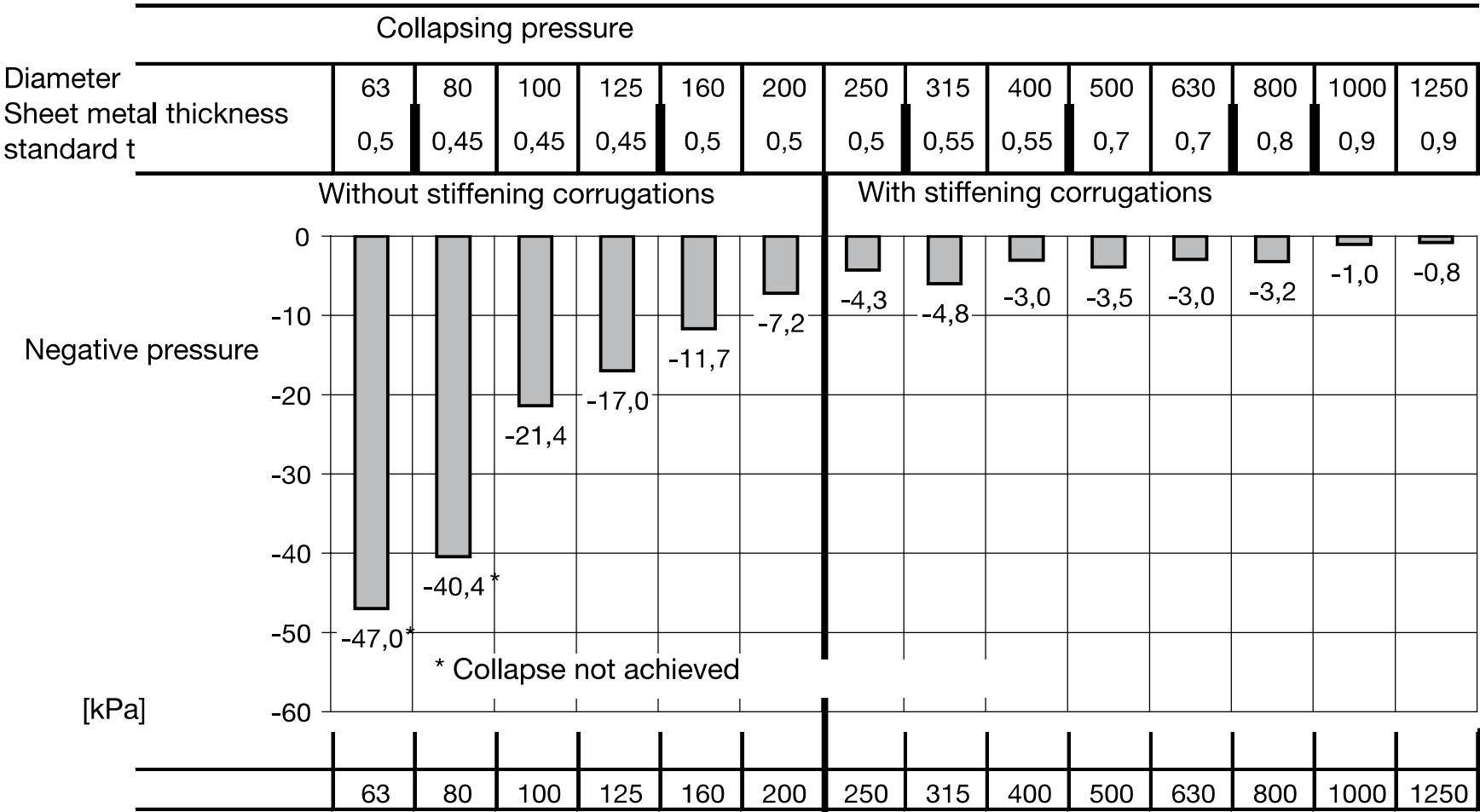
In installations with high negative pressure, there is a risk that the ducts could collapse.

This phenomenon is referred to as buckling, and can suddenly happen at the weakest point in the system. Buckling wanders along the duct, which can be completely flattened. The weakest point is frequently a "transport dent" on a duct. For this reason, only use undamaged ducts in systems which are close to the critical pressure!

Strength and leakage

The performance of the gasket ability for tightness is different from the pressure limits and is shown in the table below.

In exceptional cases, additional strong ducts and fittings are needed. Lindab has developed a system that can withstand down to 5000 Pascal's negative pressure. To minimize costs and to be sure of the performance of the specific system, contact Lindab for precise dimensioning.



	Min Dim [nom]	Max Dim [nom]	Max Negative pressure [Pa]	Min Positive pressure [Pa]
Safe Gasket stability	63	1600	-5000	3000
Duct system Eurovent certified	63	315	-5000	2000
Duct system Eurovent certified	400	1250	-750	2000
Duct system according to EN 12237	63	1250	-750	2000
Duct system - Strong solution on request	63	1600	-5000	3000



Roof hood

HF



Description

Ventilation hood for air exit above roof, suitable for both industrial and comfort ventilation. The air is ejected in an upwards-directed jet. This avoids contaminating the air in the vicinity of the hood, and soiling of the area around the hood. The ejection is so effective that you can install a fresh air inlet in the immediate vicinity of the hood, without any special precautions.

The hood is made of galvanised sheet steel, and can also be supplied in other materials such as stainless steel sheet 1.4301, stainless acid-resistant steel sheet 1.4404, aluzinc AZ185 and painted in various colours, to special order. It has a net over the opening and an internal rain funnel to collect rainwater and snow, which is drained out of the hood through a hose. The hose can withstand temperatures of between -45 and +65 °C.

The hood has a flange connection, which includes a mating flange.

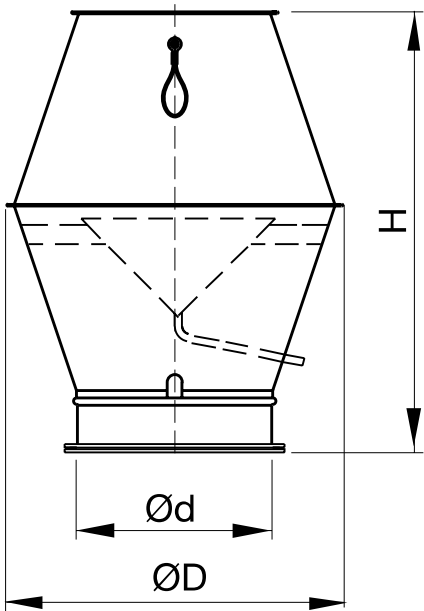
To avoid damage to the net in the opening the hood is supplied with transport protection. This must be removed before the hood is taken into service.

The hood is delivered with three turnable lifting and anchoring wire-loops. A single wire-loop shall not be exposed for forces exceeding 1500 N.

Ordering example

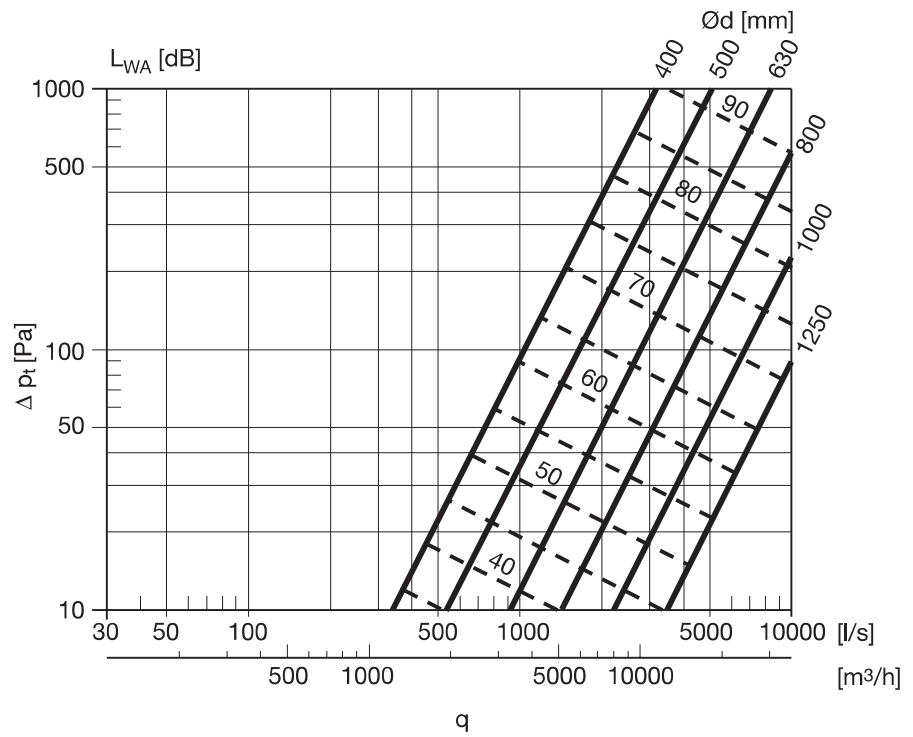
Product code	HF	630
Dimension Ød		

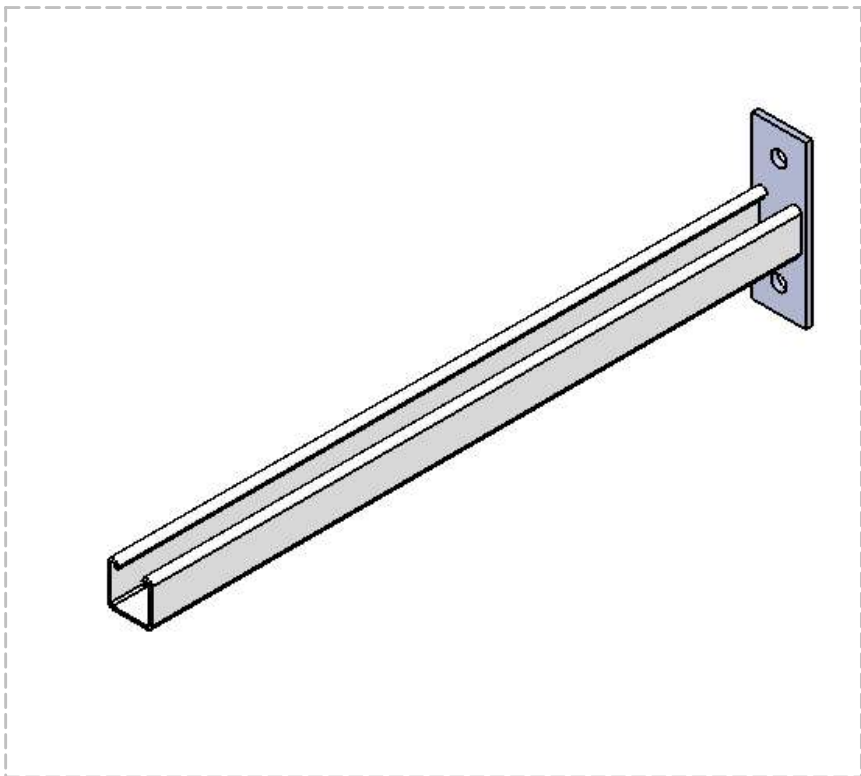
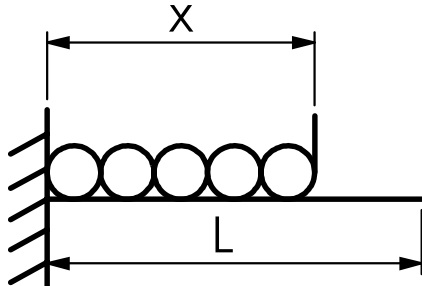
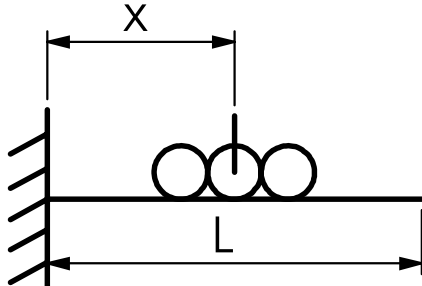
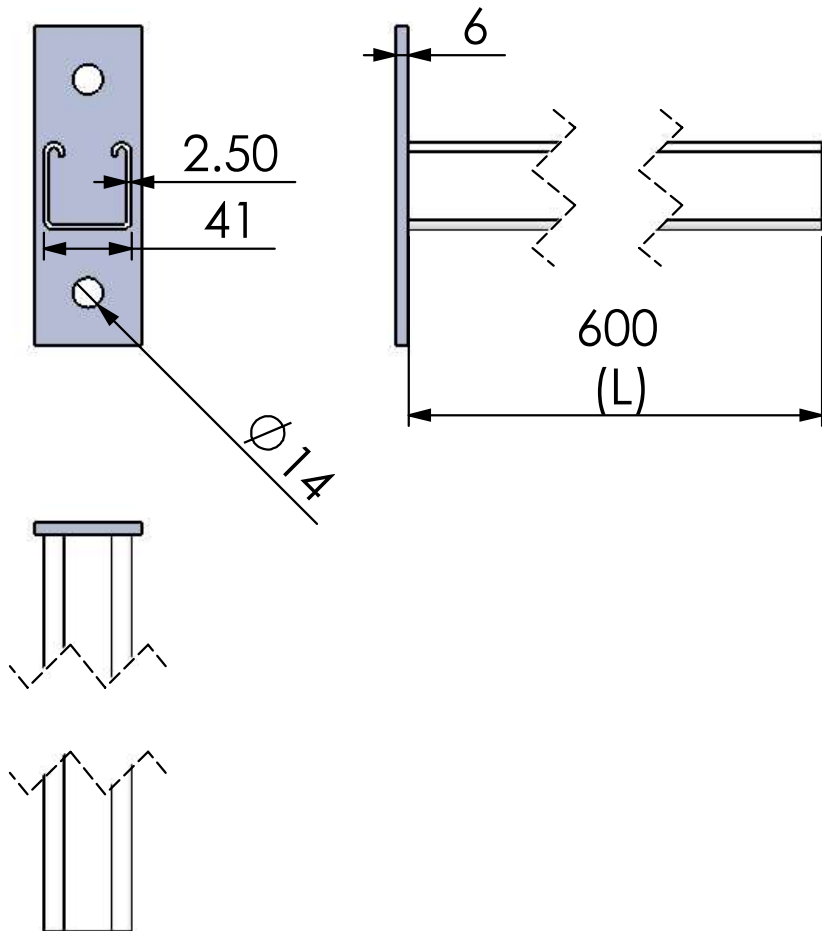
Dimensions

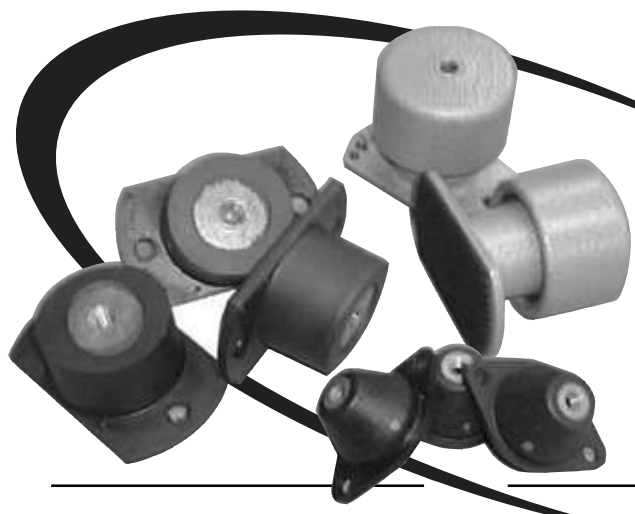


Ød nom	ØD mm	H mm	m kg	Roof through con- nection TGR	
				50 mm	100 mm
				Size	
400	685	905	11,1	5	6
500	855	1055	20,0	6	7
630	1075	1295	38,0	8	9
800	1360	1640	63,0	9	10
1000	1600	2110	89,1	11	12
1250	2020	2615	118	14	15

Technical data



Product Data Sheet 																																																
Product Code:	Issue No.	Issue Date:	Issue by:																																													
TC103-60	A	03.10.09	D.B.P																																													
Description		  Total Uniformly Distributed Load  Concentrated Load																																														
Light Duty Cantilever Arm Support - 600mm																																																
Features																																																
Brackets are designed to comply with BS6946																																																
Manufactured from 6mm thick steel																																																
Special Finish: All channel brackets are post hot dipped galvanised to BS729																																																
General Characteristics																																																
Material	Low carbon steel strip (BSEN10142:2000)																																															
Finish	Hot Dipped Zinc																																															
Cantilever Arm	41 x 41mm strut 2.5mm channel																																															
Cantilever length	600mm																																															
Suitable for Tray width	450mm																																															
Dimensions		Recommended Safe Loads (kg)																																														
		<table><tr><th>x (m)</th><th>Total Uniformly Distributed Load (kg)</th><th>Concentrated Load (kg)</th></tr><tr><td>0.10</td><td>684</td><td>342</td></tr><tr><td>0.15</td><td>608</td><td>342</td></tr><tr><td>0.20</td><td>542</td><td>283</td></tr><tr><td>0.25</td><td>452</td><td>226</td></tr><tr><td>0.30</td><td>377</td><td>188</td></tr><tr><td>0.35</td><td>323</td><td>162</td></tr><tr><td>0.40</td><td>283</td><td>141</td></tr><tr><td>0.45</td><td>251</td><td>126</td></tr><tr><td>0.50</td><td>226</td><td>113</td></tr><tr><td>0.55</td><td>206</td><td>103</td></tr><tr><td>0.60</td><td>188</td><td>94</td></tr><tr><td>0.65</td><td>174</td><td>87</td></tr><tr><td>0.70</td><td>162</td><td>81</td></tr><tr><td>0.75</td><td>151</td><td>75</td></tr></table>		x (m)	Total Uniformly Distributed Load (kg)	Concentrated Load (kg)	0.10	684	342	0.15	608	342	0.20	542	283	0.25	452	226	0.30	377	188	0.35	323	162	0.40	283	141	0.45	251	126	0.50	226	113	0.55	206	103	0.60	188	94	0.65	174	87	0.70	162	81	0.75	151	75
		x (m)	Total Uniformly Distributed Load (kg)	Concentrated Load (kg)																																												
		0.10	684	342																																												
		0.15	608	342																																												
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		0.40	283	141																																												
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Tamlex - Harcourt • Halesfield 15 • Telford • Shropshire TF7 4ER																																																
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Anti Vibration Mounts (AV's)

Introduction

Anti-vibration mounting kits are available in both rubber and spring type, the correct selection and type employed will depend on the accurate calculation of the weight of the assembly to be supported.

Installation

AV mounts should not be fitted to a fan/silencer assembly unless there are flexible connectors fitted between the assembly and associated duct work.

AV mounts should be installed with the matched mounting feet and positioned such that they carry an equal proportion of the assembly weight. This is particularly important where fans and silencers are installed on suspension rods.

Figure 1. NAV 1 to NAV 5 (Resilient Rubber)

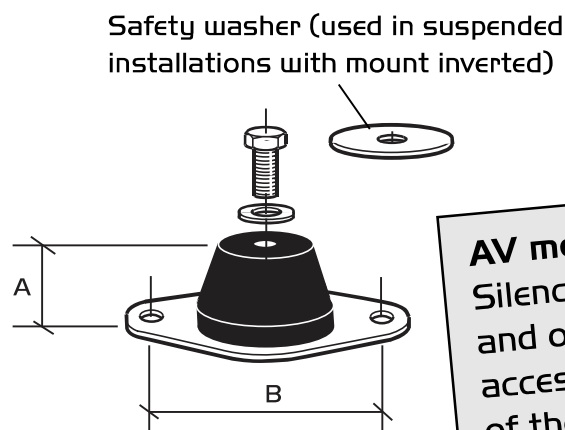


Figure 2. NAV 6 (Resilient Rubber)

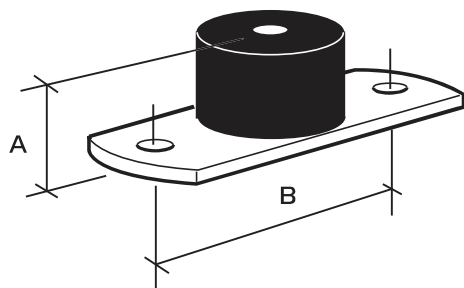
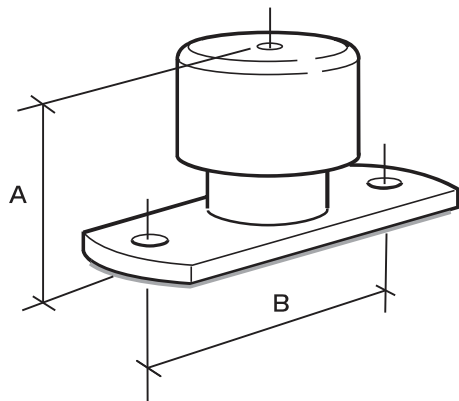


Figure 3. NAV 49 to NAV 58 (Spring)



AV mounts are maintenance free but a periodical inspection is recommended to check security of fixings and condition of rubbers and springs.

Resilient Mounting Details

Figure 4.

NAV 1 to NAV 5 shown in floor (Figure 4) and suspended configurations (Figure 5).

Fans using size NAV 6 upwards require supporting steelwork to be designed (by others) for suspended applications.

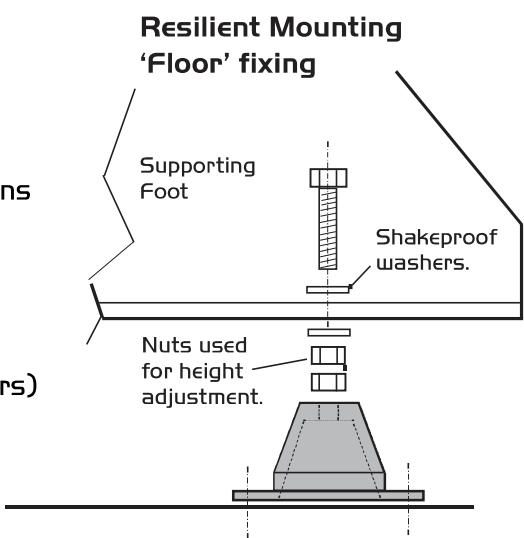
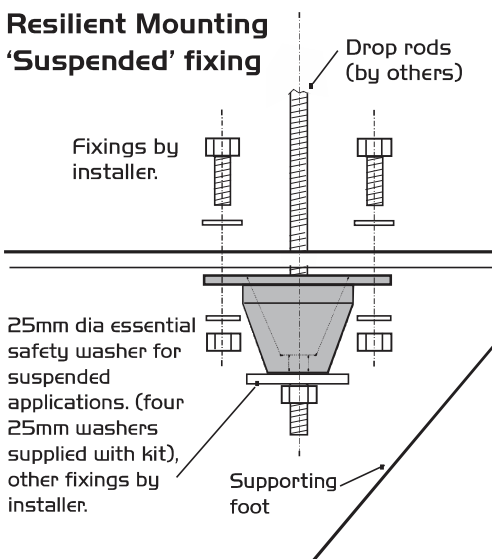


Figure 5.



AV mounts isolate the fan only. Silencers/backdraught dampers and other "significant mass" accessories should form part of the fixed ductwork after the flexible connection.

Dimensions (mm) and Weights

Rubber Type

Code	A	B	Max. kg per kit
NAV1	30	50	20
NAV2	40	75	80
NAV3	40	75	180
NAV4	40	75	260
NAV5	40	75	130
NAV6	50	100	320

Spring Type

NAV49	77	76	400
NAV50	77	76	480
NAV51	77	76	520
NAV52	87	127	600
NAV53	87	127	700
NAV54	87	127	800
NAV55	87	127	950
NAV56	87	127	1110
NAV57	87	127	1270
NAV58	87	127	1430



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 Telephone: 029 2088 5911 Facsimile: 029 2088 7033
 Email: info@nuaire.co.uk www.nuaire.co.uk

CYLINDRICAL CASED AXIAL FLOW FANS
COMPACT TCBB / TCBT Series - ALUMINIUM IMPELLERS



Range of cylindrical cased axial flow fans fitted with aluminium impellers and manufactured from high grade rolled galvanised steel and protected against corrosion by cataforesis primer and black polyester paint finish. All models are supplied with pre-wired wiring junction box located on the outside of the fan casing for easy wiring access. Available, depending upon the model, with single or three phase motors in 2, 4 or 6 poles.

Motors

Single phase motor (TCBB) or three phase motor (TCBT).
Models 250, 315, 355 and 400: External rotor motor, IP54, Class F, thermal protection, working temperature from -40°C to +40°C.
Models 450, 500, 560, 630 and 6/710: IP65, Class F, thermal protection, working temperature from -40°C to +70°C.
Models 4/710 and 800: IP55, Class F, working temperature from -40°C to +40°C.

All motors are speed controllable by autotransformer except models /4-560H, /4-630, 710 and T/800.
Three phase motors are speed controllable by inverter.
Electrical supplies:
Single phase 220-240V-50Hz.
(Capacitor located inside the wiring terminal box).
Three phase 220-240/380-415V-50Hz or 380-415V-50Hz.
(See characteristic chart).

Additional information

Standard air direction: form (B) configuration (impeller over motor).

On request

Air direction: form (A) configuration (motor over impeller).
From Ø450 to Ø800, three phase motors 2 speed, 4/8 poles.

ATEX versions TCBT

On request, explosion proof versions in accordance with ATEX Directive, for 3 phase models.

For ambient working temperatures:
From -20°C to +55°C: models TCBT/4-315 to 630mm
models TCBT/6-355 to 710mm
From -20°C to +40°C: models TCBT/4-710 to 800mm
models TCBT/6-800mm

Motors IP55 Class F

- ATEX Flameproof - Gas
In standard ATEX version flameproof motors are without thermal protection.
If used with frequency inverter, flameproof motors with a PTC-type thermal protection must be specified at order.
For models TCBT/4-710 and 800mm
⊕ models 2G Exd IIB T4
⊕ models 2G Exd IIB(H2) T4 (with Ex d IIC T4 motor)
- ATEX Increased safety - Gas
Not available TCBT/2-250/H 400V-50Hz
TCBT/4-250/H 400V-50Hz
TCBT/6-355/H 400V-50Hz
TCBT/6-400/H 400V-50Hz
Available for TCBT/6-400/H 230/400V-50Hz and larger sizes.
⊕ models 2G Exe II T3
- ATEX - Dust
In standard ATEX version, ATEX motors for dust are without thermal protection.
If used with frequency inverter, ATEX motors for dust with a PTC-type thermal protection must be specified at order.



Corrosion resistance
Rolled steel casings and motor support protected by cataforesis primer and black polyester paint finish. Stainless steel screws.



Terminal box
Wiring terminal box with cable gland PG-11 (except ATEX models).



Impeller dynamically balanced
Impellers are dynamically balanced, according to ISO 1940 standard, giving vibration free operation.



Configuration for models /4-710 and 800.



Constructive configuration models 250, 315, 355 and 400 (excepted 6-355, 6-400 and ATEX)

For models TCBT/4-710 and 800mm
Suspended flammable particles and non-conductive dust:
⊕ II 3D Ex tc IIB T125°C
Conductive dust:
⊕ II 3D Ex tc IIIC T125°C (with IP65 motor)

To select TCBT ATEX refer to performance curves, or Easyvent.
Note electrical data may vary for ATEX motors.

Specific applications



Versions

TECHNICAL CHARACTERISTICS

Before installation check that the product electrical characteristics listed on the data plate label (voltage, power, frequency, etc.) match those of the intended electrical supply.

Model	Speed (r.p.m.)	Diameter (mm)	Maximum absorbed power (W)	Maximum current (A)		Sound pressure level* (dB(A))	Maximum airflow (m³/h)	Weight (kg)	Speed controller		Variable frequency inverter	
				a 230 V	a 400 V				REB	RMB/T	VFTM	VFKB
SINGLE PHASE 2 POLE												
TCBB/2-250/H	2680	250	123	0,5	–	62	1.680	8	–	–	–	–
SINGLE PHASE 4 POLE												
TCBB/4-250/H	1430	250	44	0,2	–	42	900	8	REB-1	RMB-1,5	–	–
TCBB/4-315/H	1435	315	105	0,6	–	52	1.990	11	REB-1	RMB-1,5	–	–
TCBB/4-355/H	1420	355	120	0,6	–	52	2.460	13,2	REB-2,5	RMB-1,5	–	–
TCBB/4-400/H	1410	400	277	1,1	–	60	5.050	15,5	REB-2,5	RMB-3,5	–	–
TCBB/4-450/H	1410	450	591	2,5	–	63	6.940	21	–	–	–	–
TCBB/4-500/H	1410	500	636	2,8	–	66	7.500	25	REB-5	RMB-3,5	–	–
TCBB/4-560/L	1405	560	1289	6	–	68	11.990	33	REB-10	RMB-8	–	–
TCBB/4-560/H	1400	560	1308	6	–	69	12.170	34,7	–	–	–	–
TCBB/4-630/L	1365	630	1707	7,5	–	70	15.980	40	–	–	–	–
SINGLE PHASE 6 POLE												
TCBB/6-355/H	880	355	92	0,4	–	46	2.160	13,2	REB-1	RMB-1,5	–	–
TCBB/6-400/H	870	400	118	0,5	–	48	2.820	15,5	REB-1	RMB-1,5	–	–
TCBB/6-500/H	920	500	226	1	–	57	5.250	24,8	REB-2,5	RMB-1,5	–	–
TCBB/6-560/L	930	560	375	1,6	–	60	7.810	33,5	REB-5	RMB-3,5	–	–
TCBB/6-630/L	920	630	514	2,1	–	60	10.410	38,5	REB-5	RMB-8	–	–
TCBB/6-710/L	930	710	849	4,2	–	62	14.480	46	–	–	–	–
THREE PHASE 2 POLE												
TCBT/2-250/H	2775	250	114	0,3	0,2	62	1.730	8	–	–	TRI-0,37	VFKB-45
THREE PHASE 4 POLE												
TCBT/4-250/H	1470	250	42	0,3	0,2	42	900	8	–	RMT-1,5	TRI-0,37	VFKB-45
TCBT/4-315/H	1445	315	99	0,5	0,3	51	1.950	11	–	RMT-1,5	TRI-0,37	VFKB-45
TCBT/4-355/H	1415	355	117	0,5	0,3	52	2.470	13,2	–	RMT-1,5	TRI-0,37	VFKB-45
TCBT/4-400/H	1410	400	268	0,9	0,5	60	4.950	15,5	–	RMT-1,5	TRI-0,37	VFKB-45
TCBT/4-450/H	1405	450	526	1,9	1,1	63	6.650	21	–	RMT-2,5	TRI-0,55	VFKB-45
TCBT/4-500/H	1420	500	641	2,6	1,5	66	7.590	25	–	RMT-2,5	TRI-0,55	VFKB-45
TCBT/4-560/L	1415	560	1184	3,8	2,2	68	12.090	33	–	RMT-2,5	TRI-0,75	VFKB-45
TCBT/4-560/H	1390	560	1348	4,2	2,4	69	13.370	34,7	–	–	TRI-1,1	VFKB-45
TCBT/4-630/L	1410	630	1768	5,9	3,4	70	16.370	39	–	–	TRI-1,5	VFKB-45
TCBT/4-630/H	1400	630	1940	6,2	3,6	70	17.030	40	–	–	TRI-1,5	VFKB-45
TCBT/4-710/L	1435	710	2175	6,4	3,7	73	20.290	46	–	–	TRI-1,5	VFKB-45
TCBT/4-710/H	1460	710	3441	10,6	6,1	73	26.420	54	–	–	TRI-3	VFKB-48
TCBT/4-800/L	1460	800	3750	11,3	6,5	76	29.950	65	–	–	TRI-3	VFKB-48
TCBT/4-800/K	1460	800	5177	–	8,8	76	34.950	68	–	–	TRI-4	–
TCBT/4-800/G	1470	800	6146	–	11,1	77	38.500	81	–	–	TRI-5,5	–
TCBT/4-800/H	1475	800	7688	–	13	78	42.490	89	–	–	TRI-5,5	–
THREE PHASE 6 POLE												
TCBT/6-355/H	900	355	97	0,4	0,2	47	2.250	13,2	–	RMT-1,5	TRI-0,37	VFKB-45
TCBT/6-400/H	860	400	116	0,4	0,2	49	2.970	15,5	–	RMT-1,5	TRI-0,37	VFKB-45
TCBT/6-450/H	940	450	161	0,7	0,4	54	4.020	20,7	–	RMT-1,5	TRI-0,37	VFKB-45
TCBT/6-500/H	930	500	198	0,9	0,5	57	4.990	24,8	–	RMT-1,5	TRI-0,37	VFKB-45
TCBT/6-560/H	920	560	363	1,4	0,8	60	7.630	33,5	–	RMT-2,5	TRI-0,55	VFKB-45
TCBT/6-630/L	915	630	595	–	1,3	60	10.940	38	–	RMT-2,5	TRI-0,55	VFKB-45
TCBT/6-630/H	950	630	906	–	2,7	62	13.610	38,5	–	RMT-5	TRI-1,1	VFKB-45
TCBT/6-710/L	910	710	967	3,5	2,0	62	16.240	46	–	–	TRI-1,1	VFKB-45
TCBT/6-710/H	910	710	1378	5,4	3,1	63	19.120	46	–	–	TRI-1,1	VFKB-45
TCBT/6-800/L	965	800	1278	4,7	2,7	66	20.770	57	–	–	TRI-1,1	VFKB-45
TCBT/6-800/K	975	800	1592	5,7	3,3	66	24.090	64	–	–	TRI-1,5	VFKB-45
TCBT/6-800/G	975	800	1968	8,0	4,6	67	26.310	68	–	–	TRI-2,2	VFKB-45
TCBT/6-800/H	970	800	2345	8,7	5	68	27.910	80	–	–	TRI-2,2	VFKB 48

* Sound pressure level measured in free field conditions at a distance equivalent to three times the diameter of the impeller with a minimum of 1,5 meters.
For more information see Acoustic characteristics.

REFERENCE

T	C	B	T	/	4	-	4	0	0	/	H	-	B	4	0	0	V	5	0	Hz			
1	2	3	4		5		6				7		8	9				10			11		

- 1 - **T**: Cylindrical cased axial flow fan.

2 - **C**: Series designation.

3 - Impeller type:
B: Ø 250 - Ø 400 Fixed blade impeller manufactured from aluminium sheet.
Ø 450 - Ø 800 Adjustable blade aluminium impeller.

4 - Supply type:
B: Single phase.
T: Three phase.

5 - Number of poles:
2: (approx. 2800 rpm - 50 Hz)
4: (approx. 1400 rpm - 50 Hz)
6: (approx. 900 rpm - 50 Hz)
- 6 - Nominal diameter of fan in mm.
Ø 450 up to Ø 800 mm.

7 - Pitch angle.
6/12 poles of motor for models from Ø 710 up to Ø 800 mm.

8 - Direction of air:
A: Motor over Impeller.
B: Impeller over Motor.

9 - Voltage:
230 V (single phase).
230/400 V (three phase).
400 V (three phase).

10 - Frequency of service: 50 Hz
60 Hz

11 - Special versions:
2 V: Two speed motors.
4/8 poles of motor for models:
- C**: Condensation drain holes on motor.

EX: Explosion proof and flame proof versions.

SUPPLY VOLTAGES AND FREQUENCIES



Mains supply voltage	Motor type	Connection	Speed
SINGLE PHASE 220V-50Hz, 240V-50Hz	230V 50Hz	See wiring diagram	High
THREE PHASE 220V-50Hz 240V-50Hz	230/400V 50Hz		High
			Low*
THREE PHASE 380V-50Hz 415V-50Hz	230/400V 50Hz		High
	400V 50Hz		High
			Low*

* For models allowed by speed controller RMT.

ACOUSTIC CHARACTERISTICS

The sound levels shown in the technical characteristic chart and performance curves, correspond to the value of sound pressure dB(A), measured in free field conditions at a distance equivalent to three times the diameter of the impeller with a minimum of 1.5 meters.

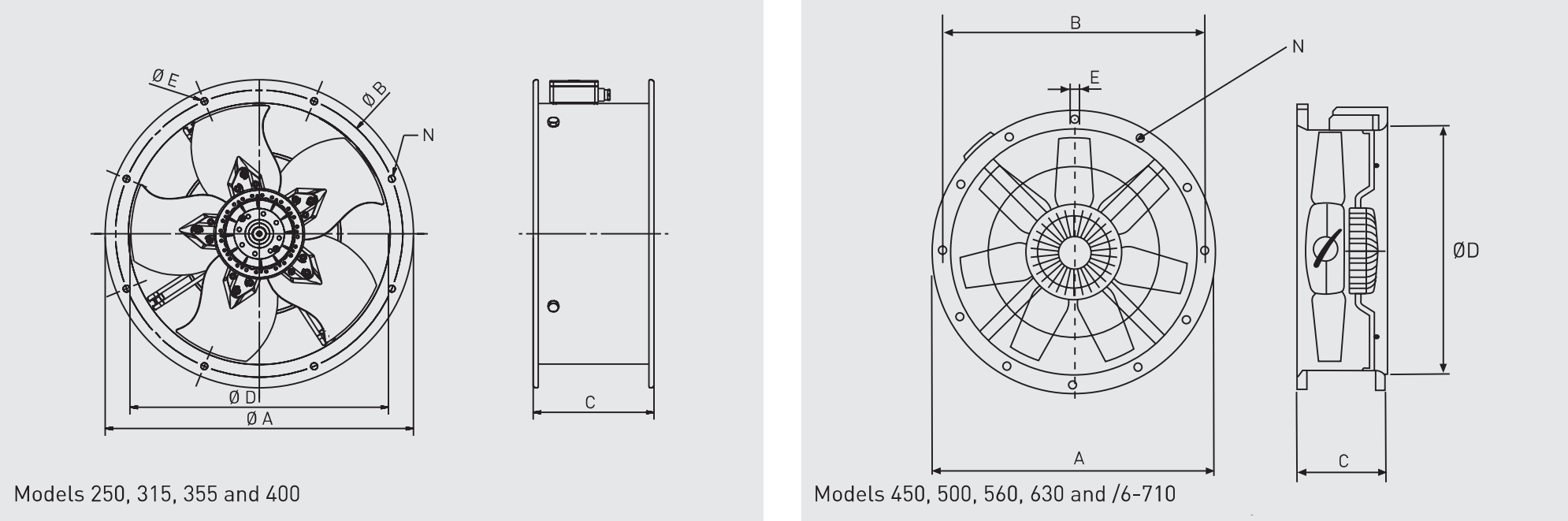
Sound power level spectrum in dB(A) at the corresponding frequency band in Hz and the point of maximum flow.

Model	63	125	250	500	1000	2000	4000	8000	LwA
/2-250/H	31	44	59	65	74	70	64	56	76

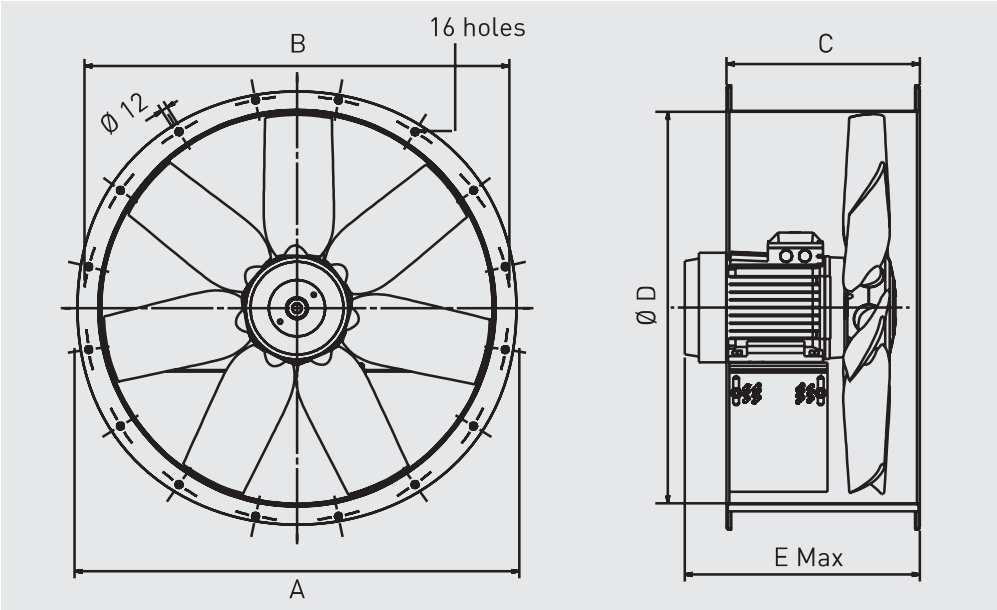
Model	63	125	250	500	1000	2000	4000	8000	LwA
/4-250/H	24	37	41	47	52	52	47	41	57
/4-315/H	40	51	45	53	59	59	51	43	63
/4-355/H	24	40	45	55	58	58	49	42	62
/4-400/H	46	53	59	66	69	69	66	58	74
/4-450/H	46	58	65	71	73	71	67	59	77
/4-500/H	50	62	69	75	76	75	70	62	81
/4-560/L	52	64	71	77	78	77	72	64	83
/4-560/H	53	65	72	78	79	78	73	65	84
/4-630/L	56	67	75	80	82	81	76	68	87
/4-630/H	56	67	75	80	82	81	76	68	87
/4-710/L	53	69	79	85	86	84	78	70	91
/4-710/H	60	72	79	85	86	85	80	72	91
/4-800/L	57	73	83	90	91	88	82	74	95
/4-800/K	63	75	82	88	90	88	84	76	94
/4-800/G	64	76	83	89	90	89	84	76	95
/4-800/H	66	77	84	90	92	91	86	78	96

Model	63	125	250	500	1000	2000	4000	8000	LwA
/6-355/H	31	42	49	55	57	55	51	43	61
/6-400/H	33	44	51	57	59	58	53	45	64
/6-450/H	40	51	58	63	64	62	56	48	69
/6-500/H	43	53	61	66	66	64	58	50	71
/6-560/L	46	57	64	69	70	67	61	53	74
/6-560/H	46	56	64	69	69	67	61	53	74
/6-630/L	49	59	66	71	72	70	64	56	77
/6-630/H	51	61	68	73	74	72	66	58	79
/6-710/L	52	62	69	75	75	73	67	59	80
/6-710/H	53	64	71	76	77	75	69	61	82
/6-800/L	51	66	76	79	79	76	69	61	84
/6-800/K	51	66	76	79	79	76	69	61	84
/6-800/G	56	67	74	79	80	78	72	64	85
/6-800/H	58	69	76	81	82	79	73	65	86

DIMENSIONS (mm)



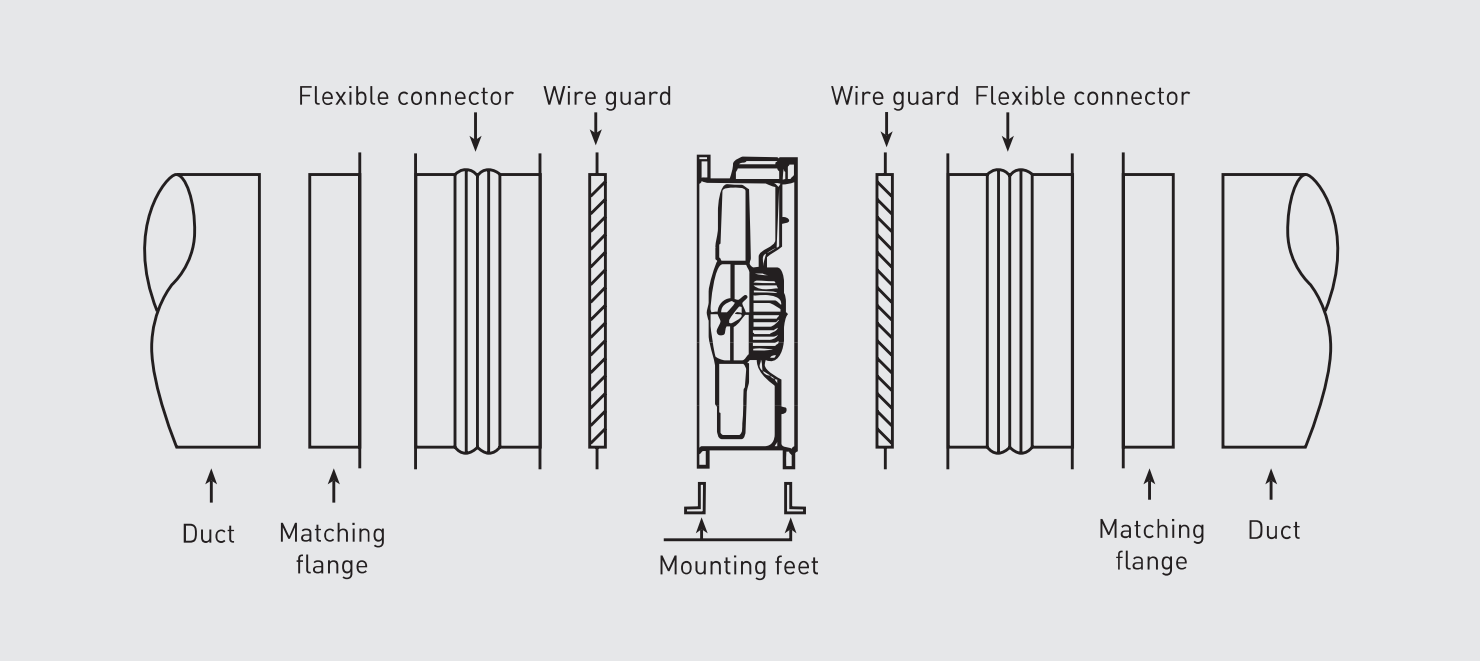
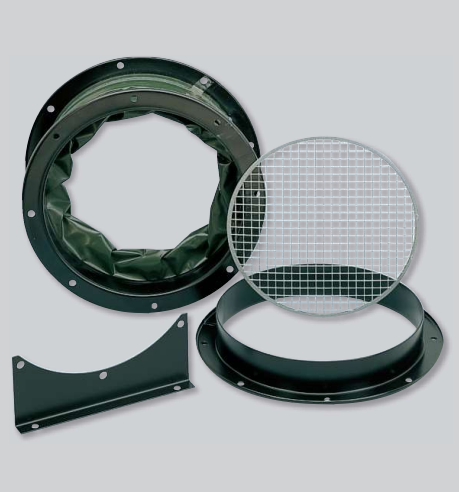
Model	Ø A	Ø B	C	Ø D	Ø E	Number of holes N
250	327	292	170	254	10	4
315	386	355	170	315	10	8
355	426	395	170	355	10	8
400 (6 poles)	487	450	170	400	12	8
400 (4 poles)	487	450	210	400	12	8
450	537	500	180	450	12	8
500	595	560	180	500	12	12
560	655	620	240	560	12	12
630	725	690	240	630	12	12
710 (6 poles)	806	770	240	710	12	16



Model	Ø A	B	C	Ø D	E		
					4 poles	6 poles	8 poles
710/L (4 poles)	806	770	380	710	415	–	–
710/H (4 poles)	806	770	380	710	444	–	–
800/L	896	860	380	800	437	408	383
800/K	896	860	380	800	448	437	408
800/G	896	860	380	800	447 (5,5kW) 515 (7,5kW)	448	437
800/H	896	860	380	800	515	477	437



MOUNTING ACCESSORIES



Model	Wire guard		Matching flange	Mounting feet	Bellmouth protection guard	Flexible connector	Flexible connector explosion proof (ATEX)
	Inlet (impeller side)	Outlet (motor side)					
TCBB / TCBT 250	DEF-250 T	DEF-250 T	ARO BRIDA COMPACT-250	PIE-250	-	ACOP.BRIDA-250	ACOPEL EX 250/160 N
TCBB / TCBT 315	DEF-315 T	DEF-315 T	ARO BRIDA COMPACT-315	PIE-315	EMB-315 T	ACOP.BRIDA-315	ACOPEL EX 315/160 N
TCBB / TCBT 355	DEF-355 T	DEF-355 T	ARO BRIDA COMPACT-355	PIE-355	EMB-355 T	ACOP.BRIDA-355	ACOPEL EX 355/160 N
TCBB / TCBT 400	DEF-400 T	DEF-400 T	ARO BRIDA COMPACT-400	PIE-400	EMB-400 T	ACOP.BRIDA-400	ACOPEL EX 400/160 N
TCBB / TCBT 450	DEF-450 T	DEF-450 T	ARO BRIDA COMPACT-450	PIE-450	EMB-450 T	ACOP.BRIDA-450	ACOPEL EX 450/160 N
TCBB / TCBT 500	DEF-500 T	DEF-500 T	ARO BRIDA COMPACT-500	PIE-500	EMB-500 T	ACOP.BRIDA-500	ACOPEL EX 500/160 N
TCBB / TCBT 560	DEF-560 T	DEF-560 T	ARO BRIDA COMPACT-560	PIE-560	EMB-560 T	ACOP.BRIDA-560	ACOPEL EX 560/160 N
TCBB / TCBT 630	DEF-630 T	DEF-630 T	ARO BRIDA COMPACT-630	PIE-630	EMB-630 T	ACOP.BRIDA-630	ACOPEL EX 630/160 N
TCBT 4-710/H	DEF-710 T	DEF-710/H-T DESCARGA	ARO BRIDA COMPACT-710	PIE-710	EMB-710 T	ACOP.BRIDA-710	ACOPEL EX 710/160 N
TCBT 4-710/L	DEF-710 T	DEF-710/L-T DESCARGA	ARO BRIDA COMPACT-710	PIE-710	EMB-710 T	ACOP.BRIDA-710	ACOPEL EX 710/160 N
TCBB / TCBT 6-710	DEF-710 T	DEF-710 T	ARO BRIDA COMPACT-710	PIE-710	EMB-710 T	ACOP.BRIDA-710	ACOPEL EX 710/160 N
TCBT 800	DEF-800 T	DEF.DES.TGT/THGT-800*	ARO BRIDA COMPACT-800	PIE-800	EMB-800 T	ACOP.BRIDA-800	ACOPEL EX 800/160 N

* For more information see Mounting achas cessories.

ELECTRICAL ACCESSORIES



REB-1N / REB-2,5N
Single phase electronic speed controllers.



**REB-5
REB-10**
Single phase electronic speed controllers.



RMB/RMT
Single and three phase auto transformer speed controllers.



VFTM TRI IP54
Adjustable frequency drive for three phase motors from 0,37 to 15 kW, 230V or 400V.



VFKB IP65
Adjustable frequency drives for three phase motors from 0,37 to 4 kW 230V or 400V.



COM D/S
To connect three phase fans with 400 V motor. For three phase models.

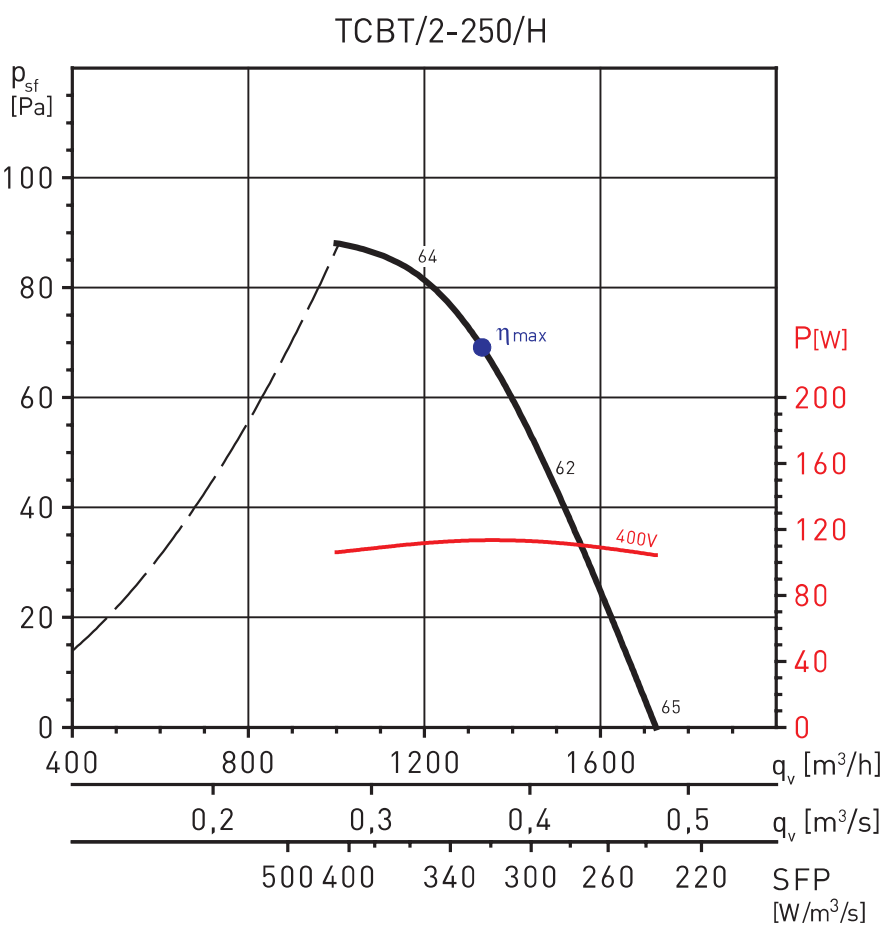
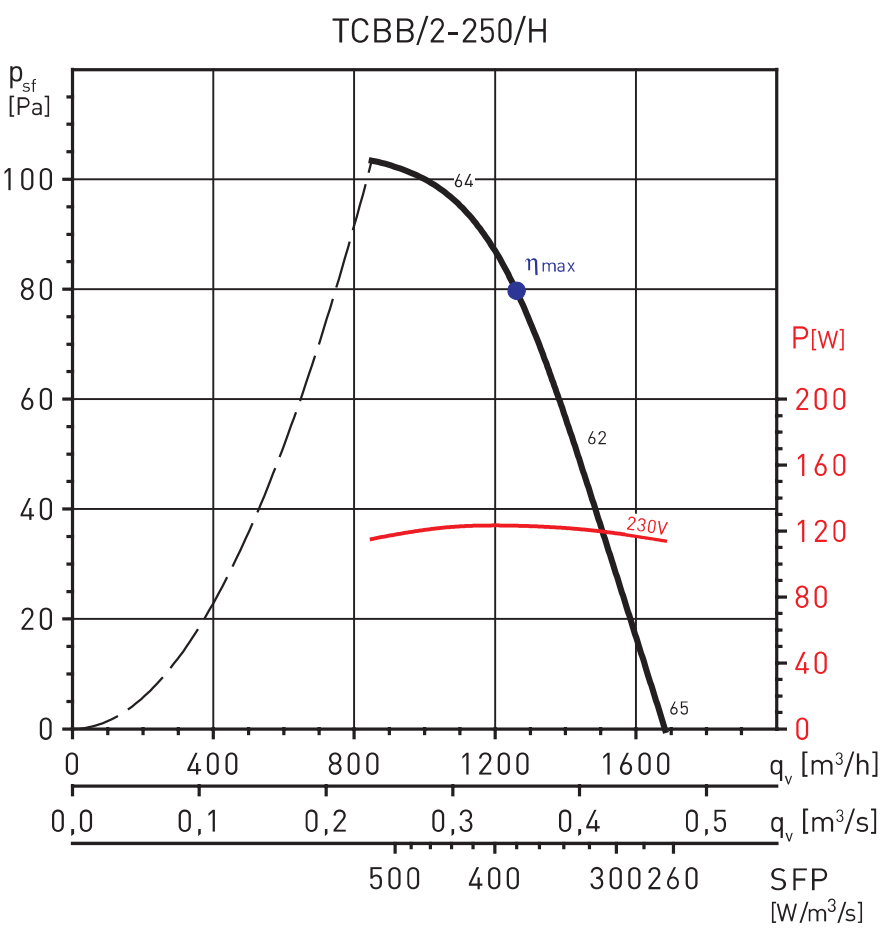


TCBB/TCBT PERFORMANCE CURVES

- q_v : Airflow in m^3/h and m^3/s .
- p_{sf} : Static pressure in Pa.
- SFP: Specific fan power in $W/m^3/s$.
- P: Input power in W.
- Measurement category: C or D depending on the models.
- Efficiency category: Static or Total depending on the models.
- Fan tested with inlet bellmouth.
- Fan efficiency without speed control.
- Airflow data in accordance with ISO 5801.
- Sound pressure level dB(A), measured in a free field distance equal to 3 times the diameter, with a minimum of 1,5 m.

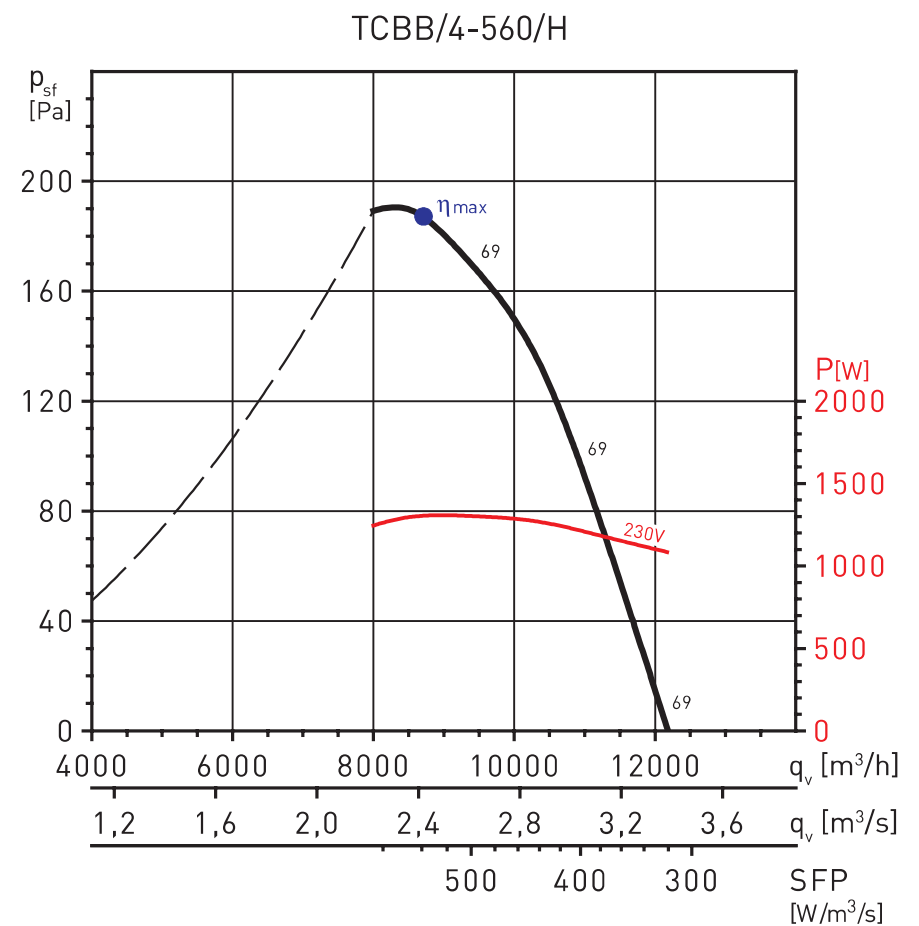
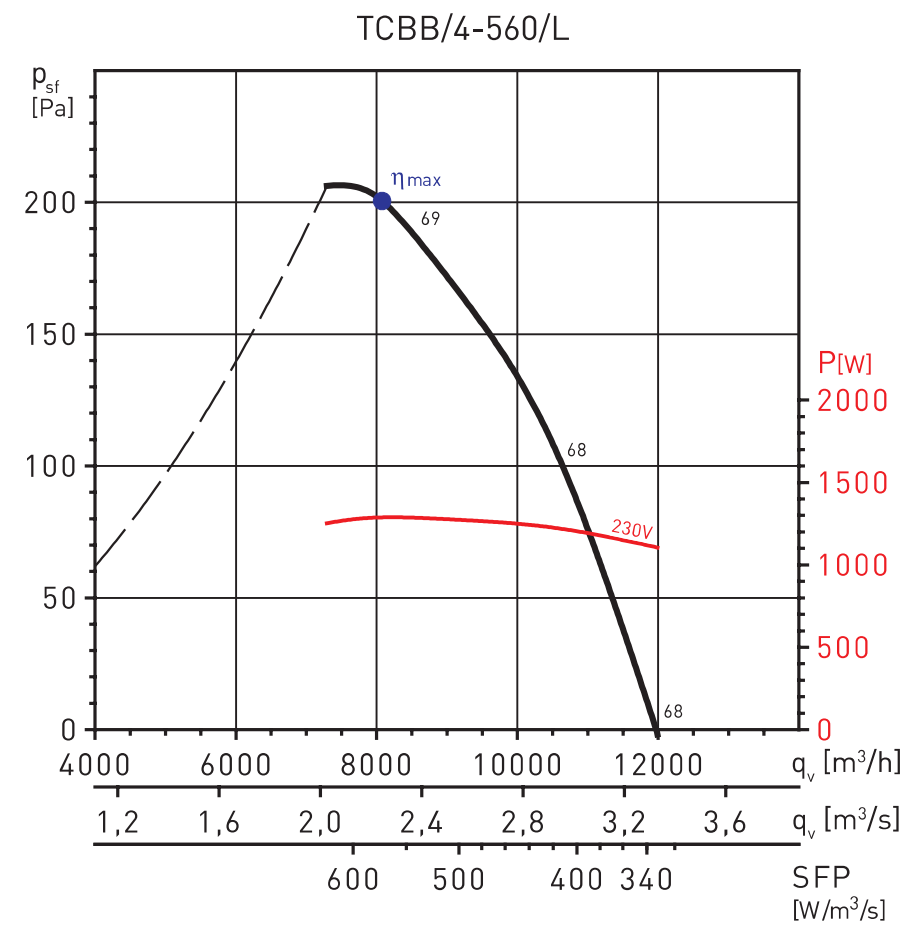
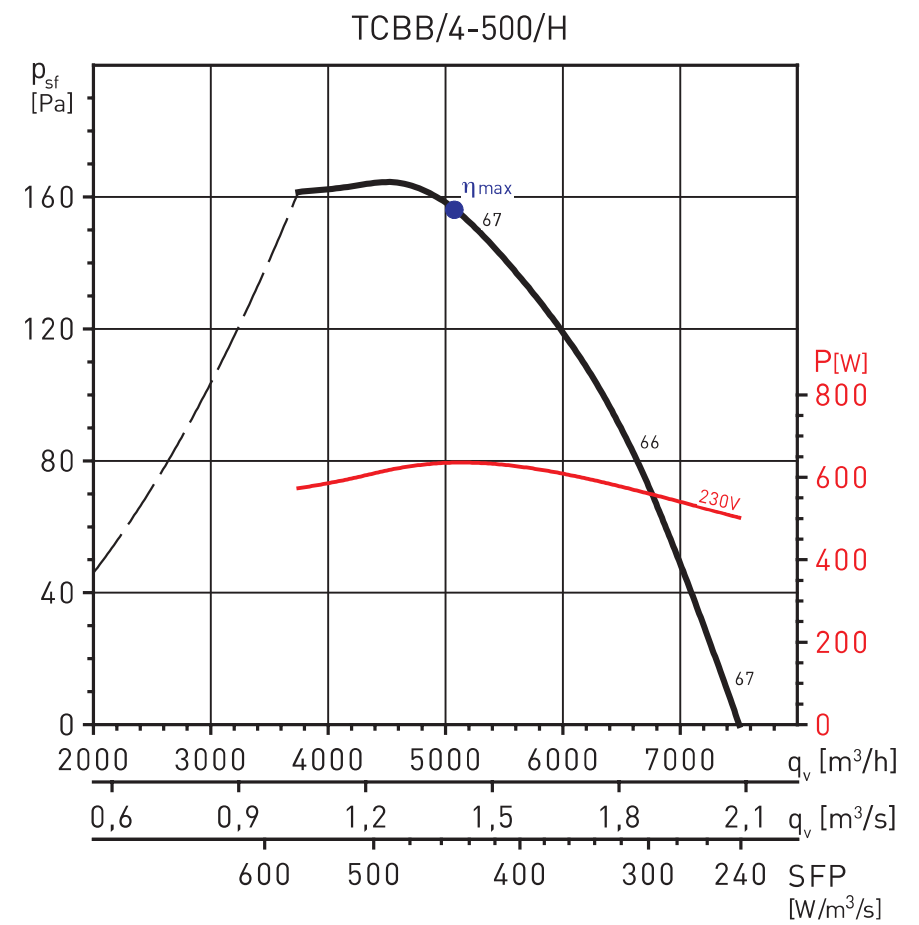
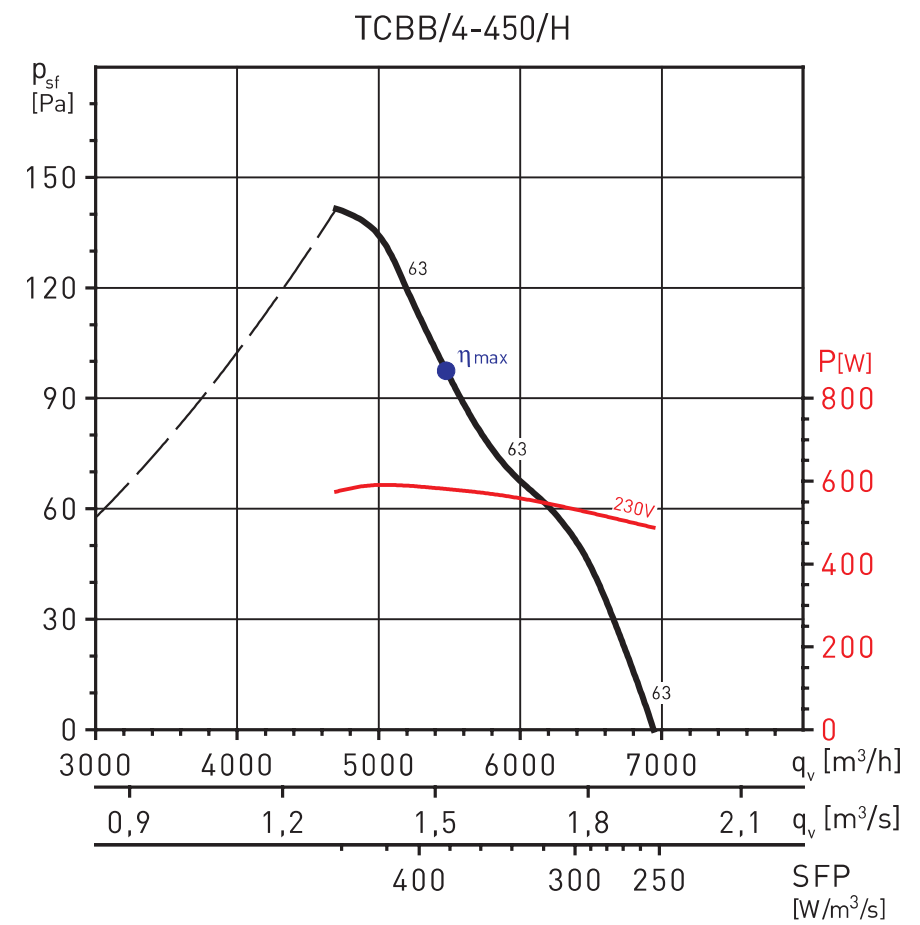
MC	Measurement category
EC	Efficiency category
VSD	Speed control: supplied with the fan
SR	Specific ratio
$\eta[\%]$	Efficiency
N	Efficiency grade
[kW]	Absorbed power
[m³/h]	Airflow
[Pa]	Static pressure
[RPM]	Speed

PERFORMANCE CURVES - 2 POLE MOTORS



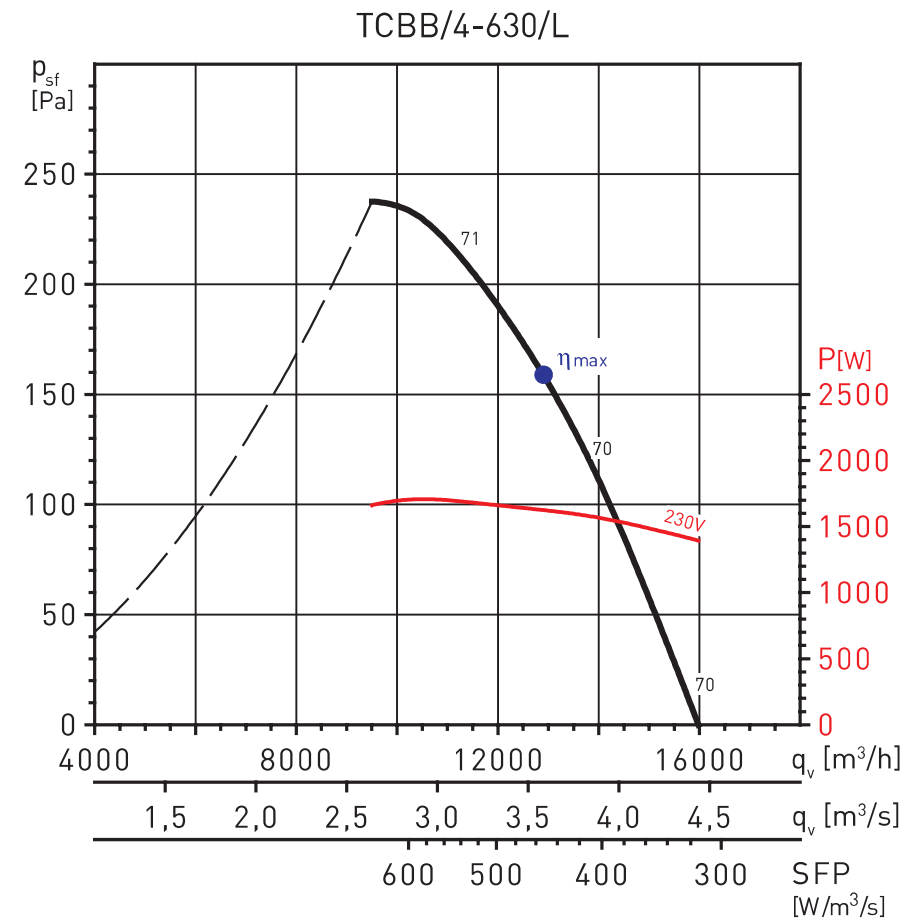
MC	EC	VSD	SR	η [%]	N	[kW]	[m³/h]	[Pa]	[RPM]
D	Total	No	1	48,5	58,4	0,267	4386	106	1397

PERFORMANCE CURVES - 4 POLE MOTORS

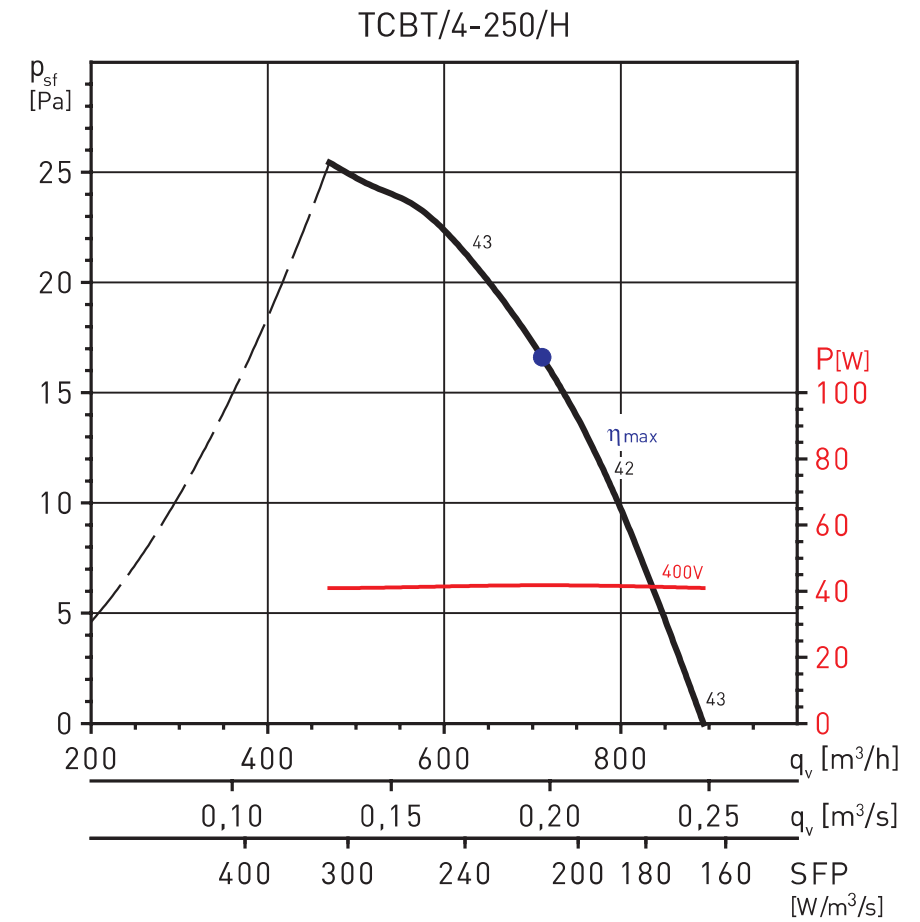




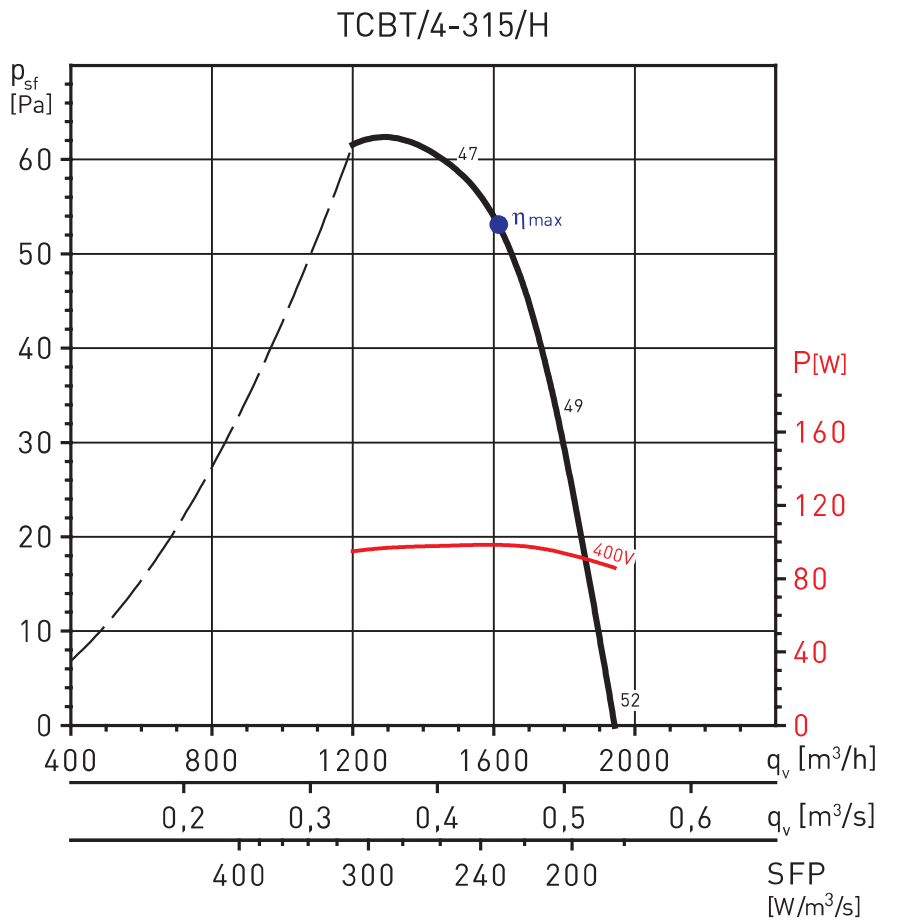
PERFORMANCE CURVES - 4 POLE MOTORS



MC	EC	VSD	SR	η [%]	N	[kW]	[m³/h]	[Pa]	[RPM]
D	Total	No	1	53,4	58,4	1,624	12.896	241	1332

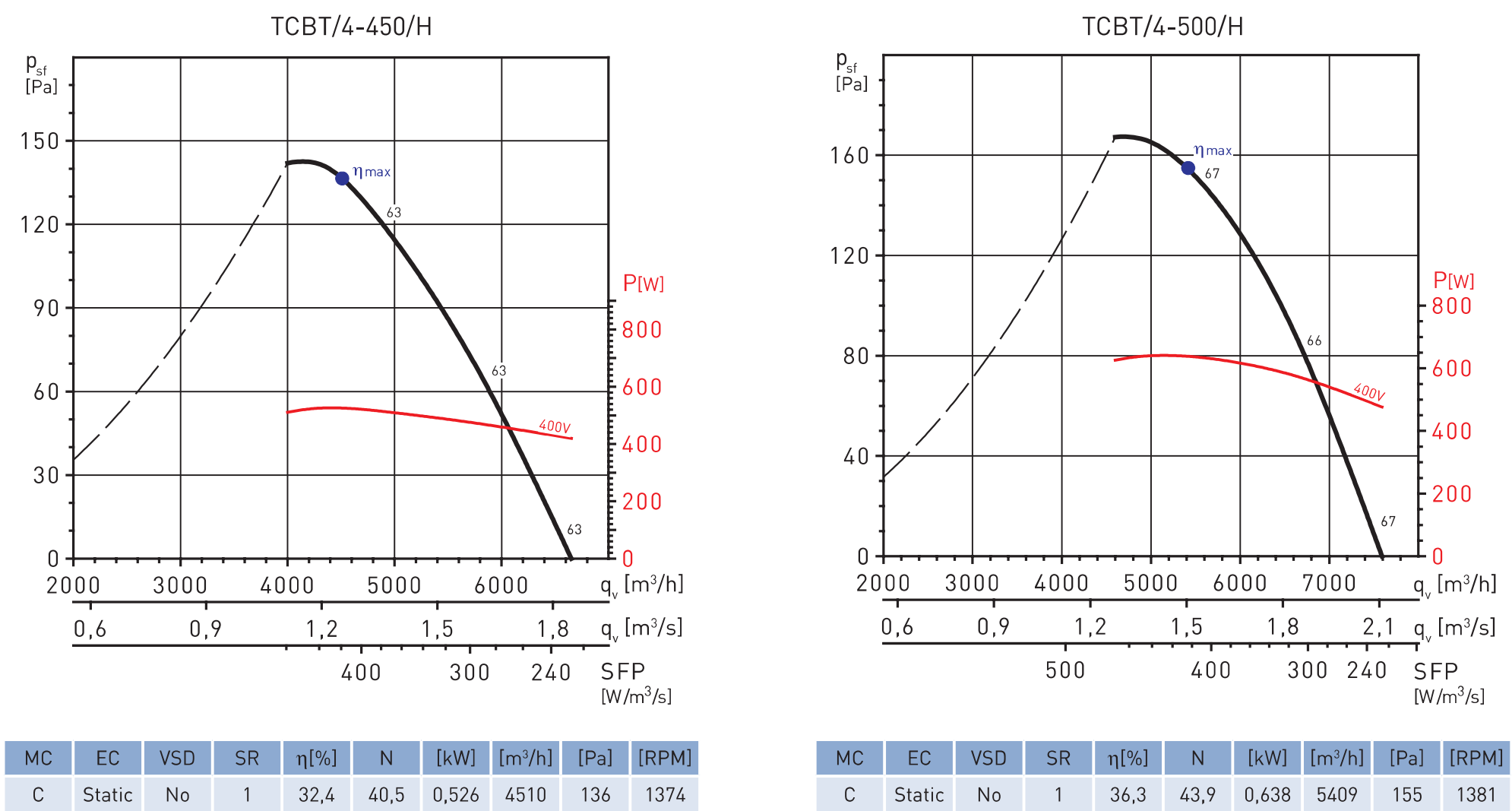
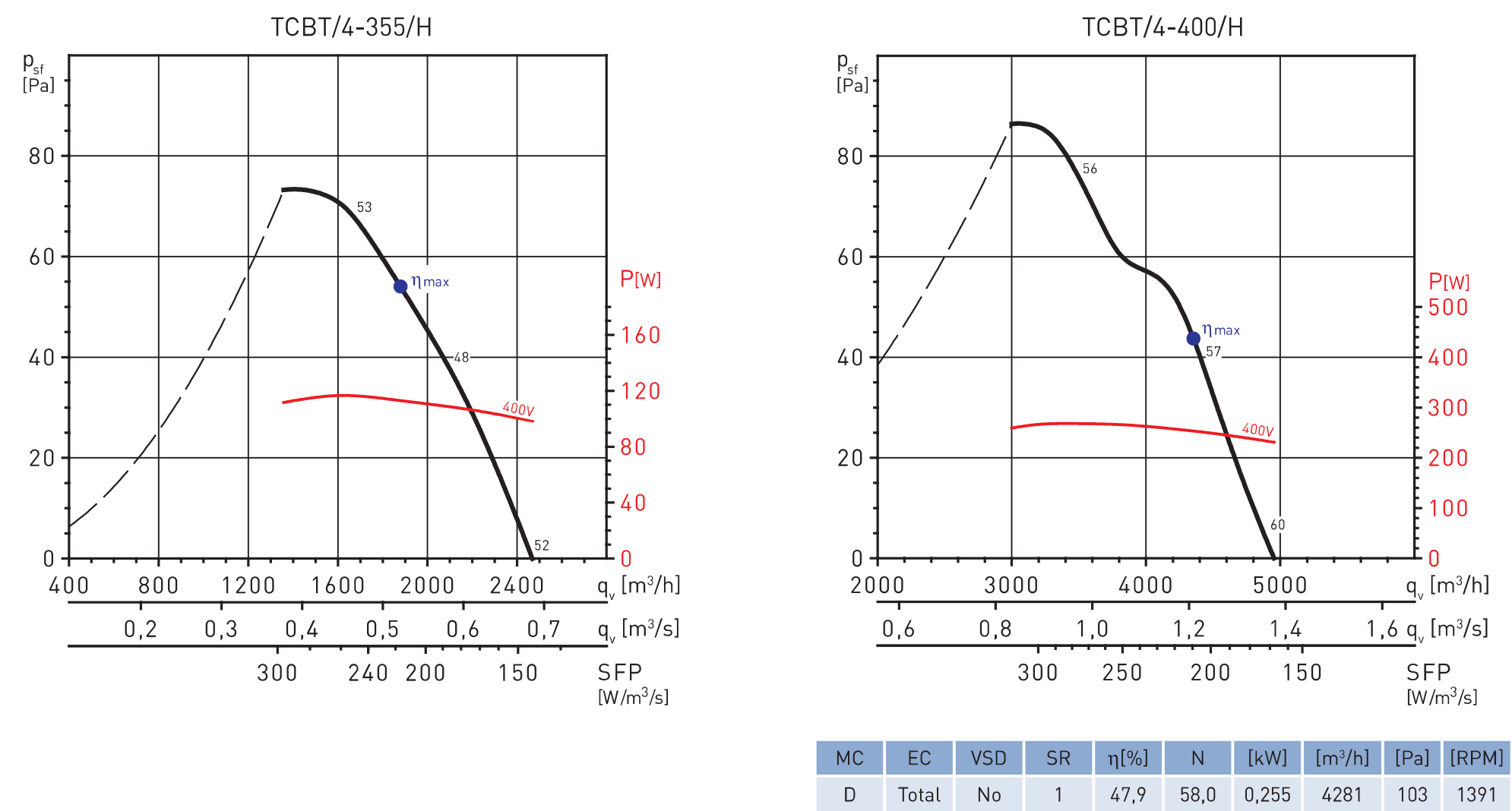


MC	EC	VSD	SR	η [%]	N	[kW]	[m³/h]	[Pa]	[RPM]
D	Total	No	1	43,4	48,4	0,400	2.896	25	180



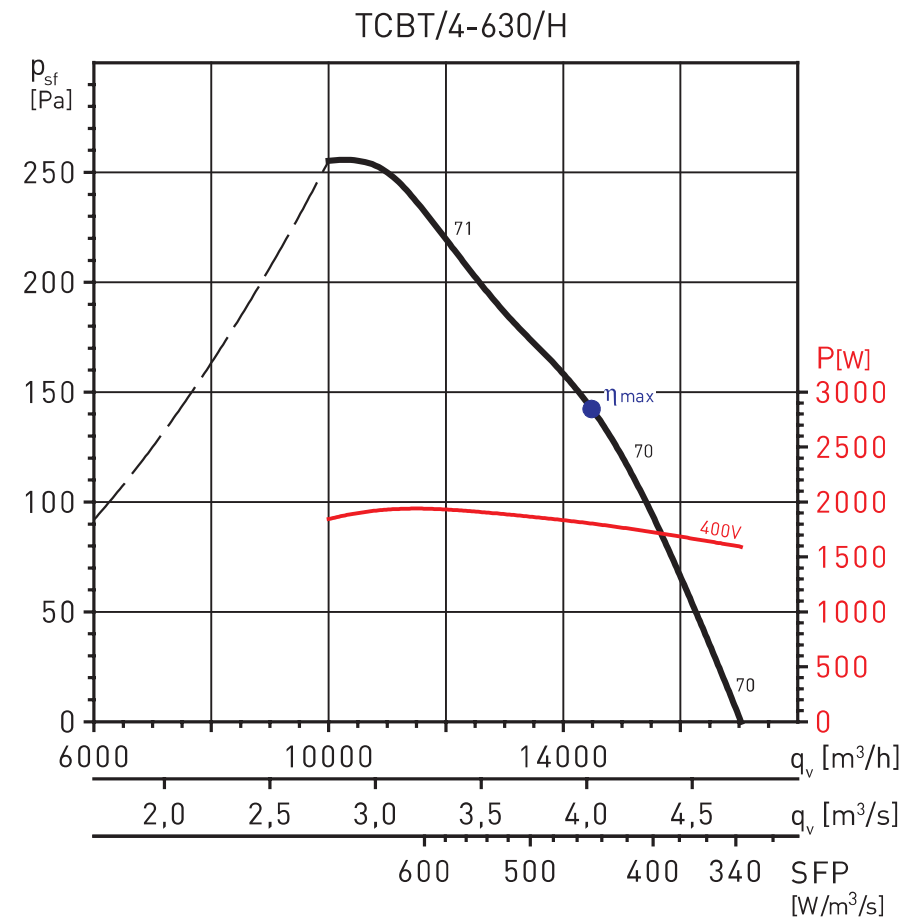
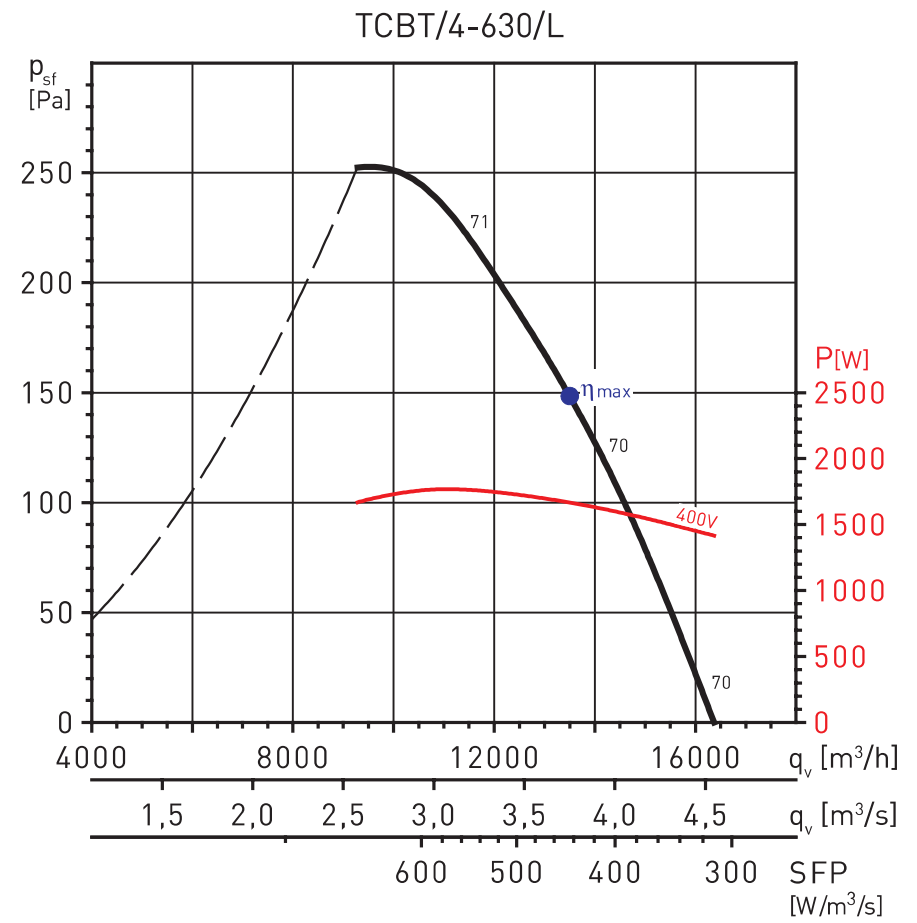
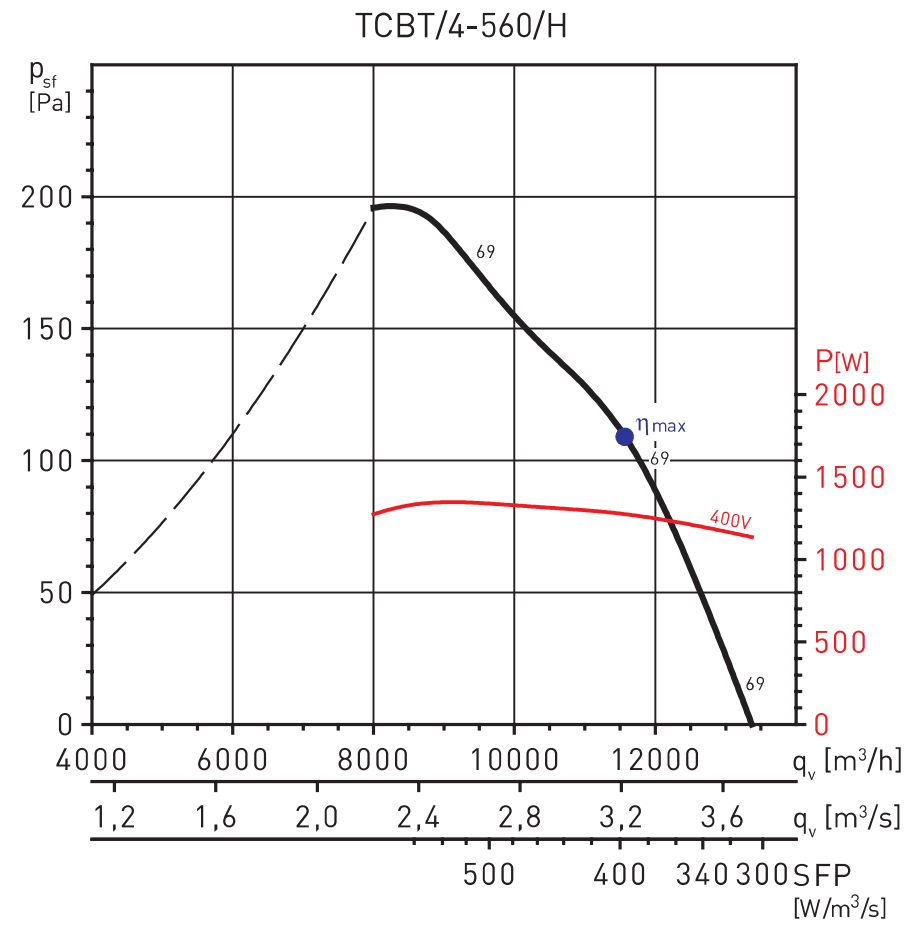
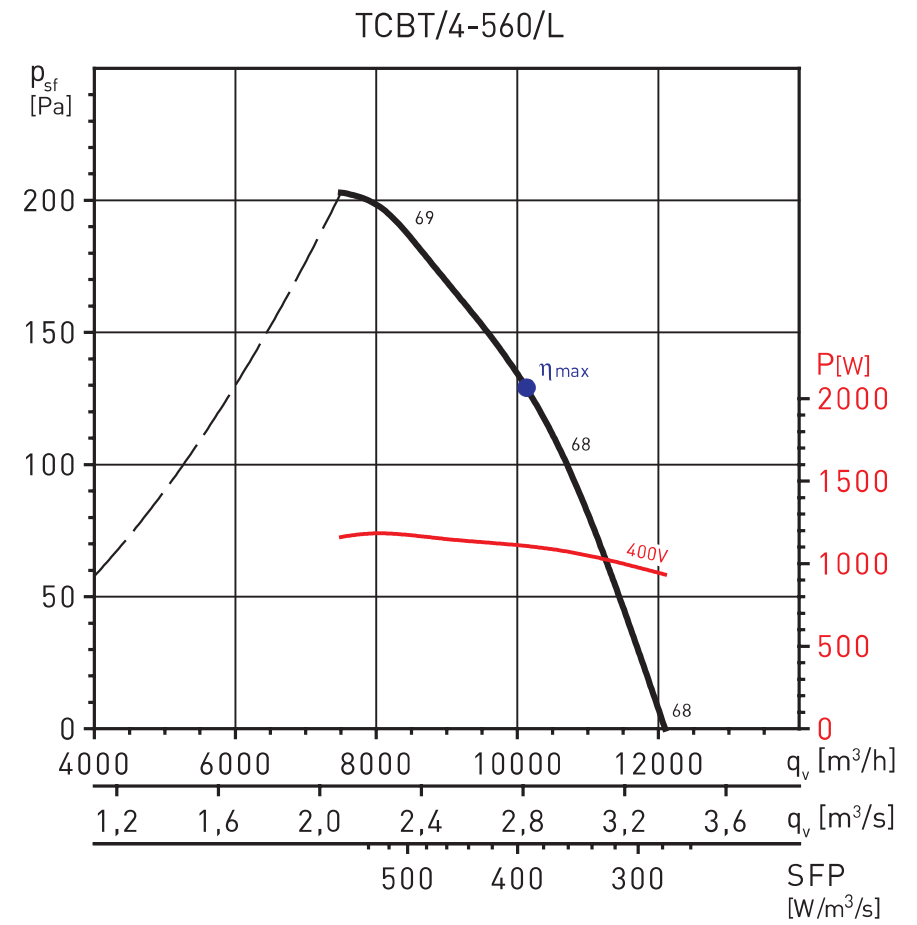
MC	EC	VSD	SR	η [%]	N	[kW]	[m³/h]	[Pa]	[RPM]
D	Total	No	1	47,4	52,4	0,800	5.896	60	240

PERFORMANCE CURVES - 4 POLE MOTORS

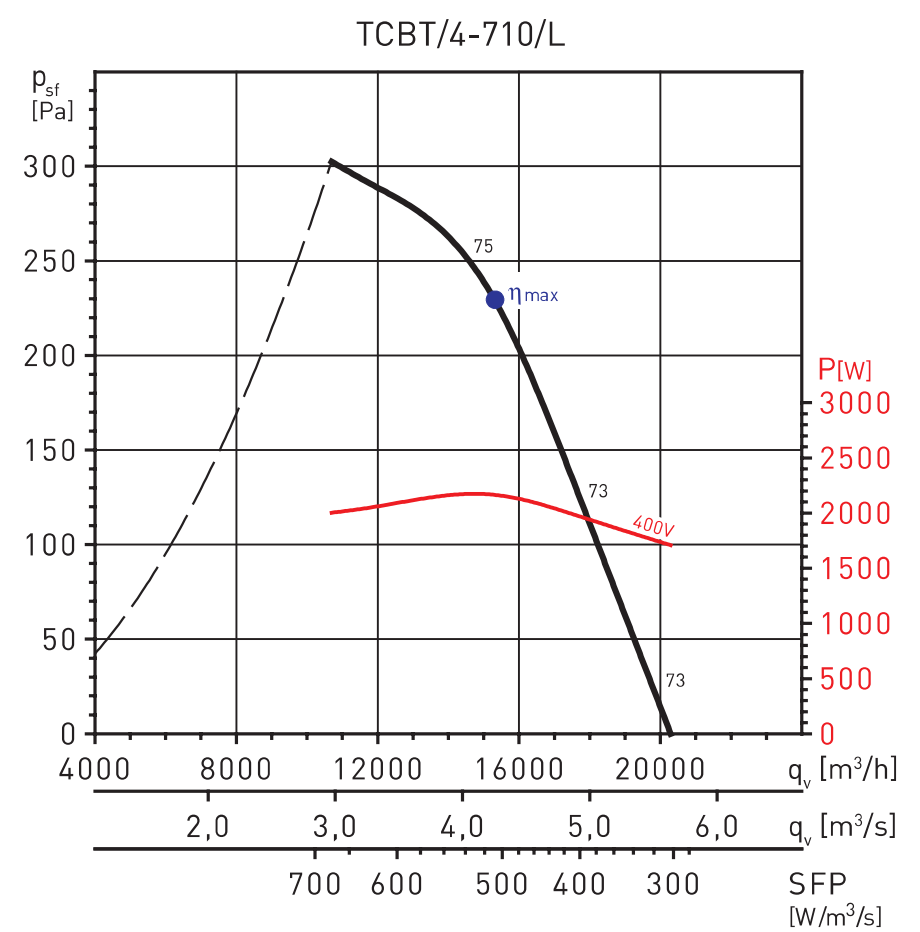




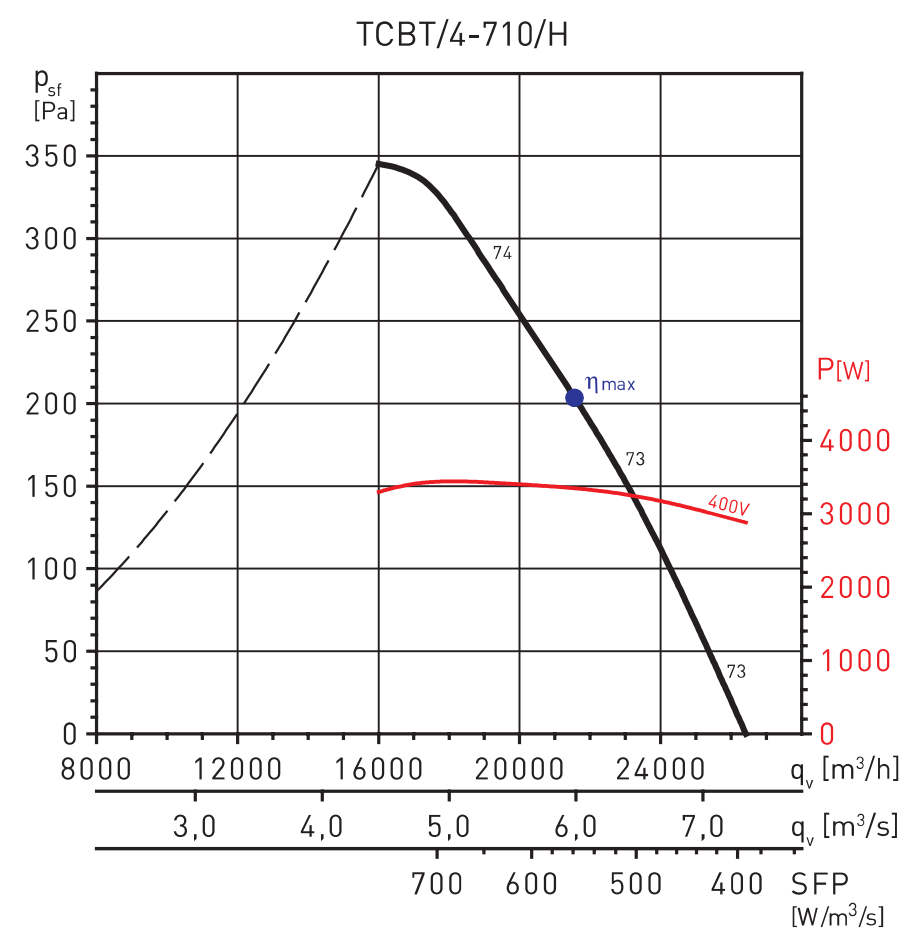
PERFORMANCE CURVES - 4 POLE MOTORS



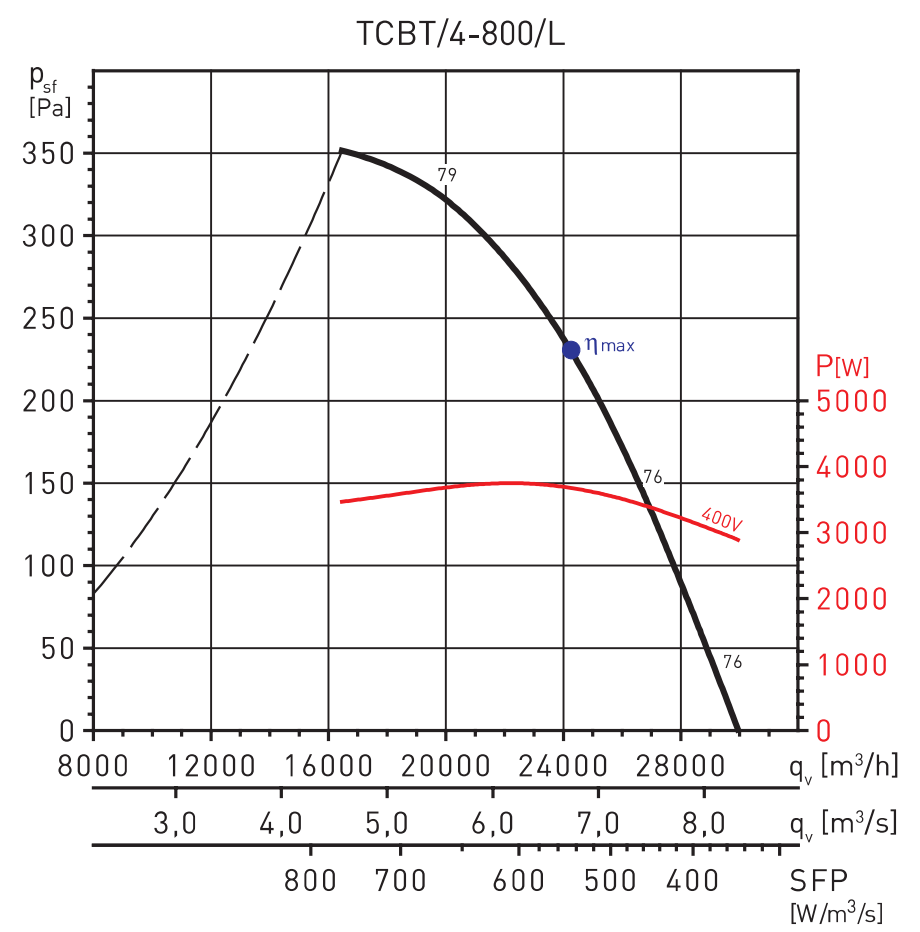
PERFORMANCE CURVES - 4 POLE MOTORS



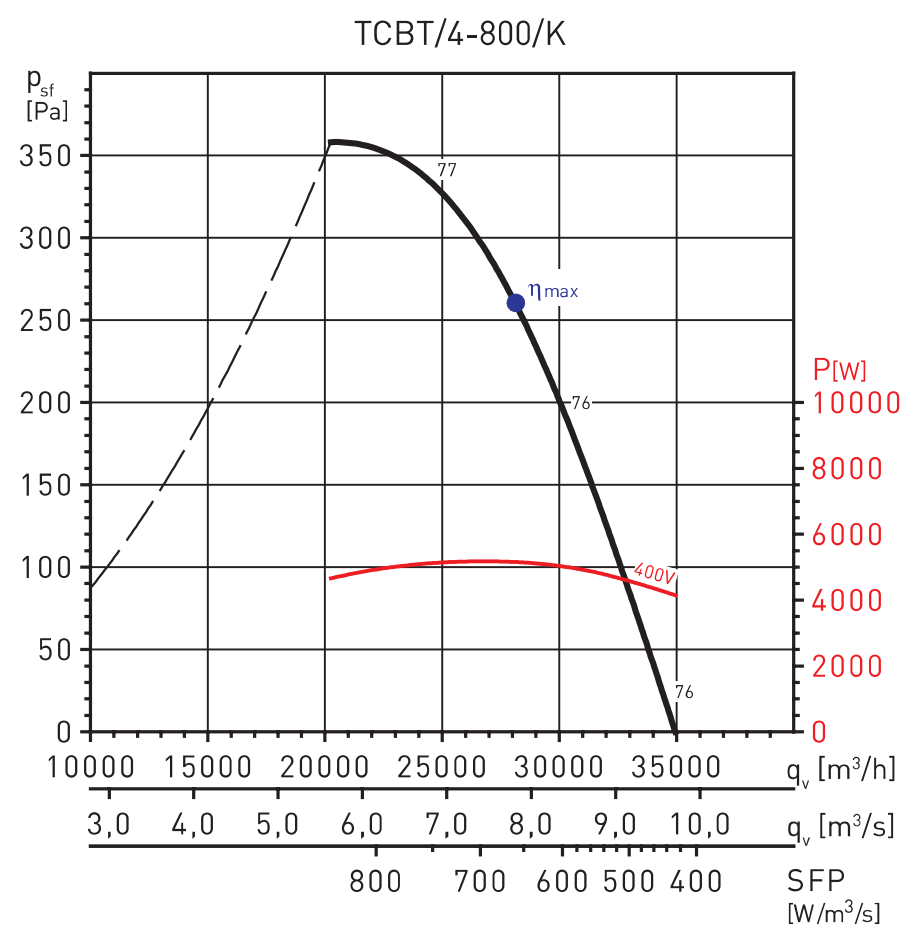
MC	EC	VSD	SR	η [%]	N	[kW]	[m³/h]	[Pa]	[RPM]
D	Total	No	1	58,7	62,9	2,166	15306	299	1414



MC	EC	VSD	SR	η [%]	N	[kW]	[m³/h]	[Pa]	[RPM]
D	Total	No	1	61,4	64,4	3,346	21563	341	1451



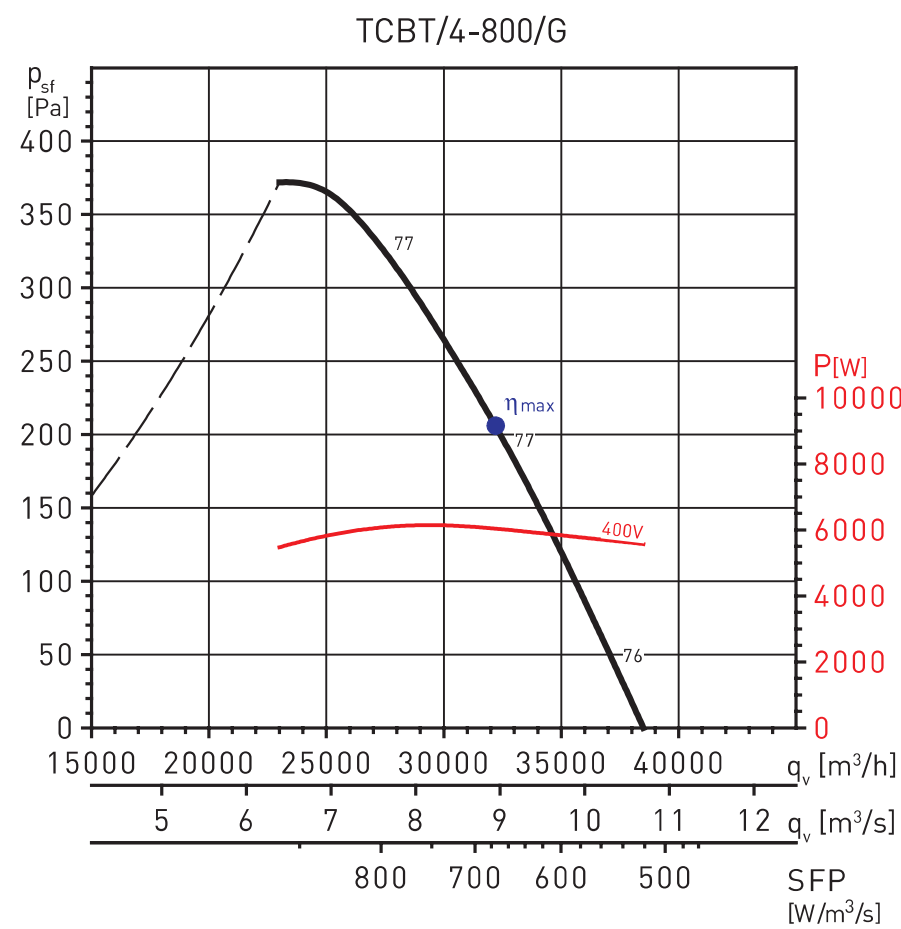
MC	EC	VSD	SR	η [%]	N	[kW]	[m³/h]	[Pa]	[RPM]
D	Total	No	1	62,4	65,2	3,678	24248	339	1445



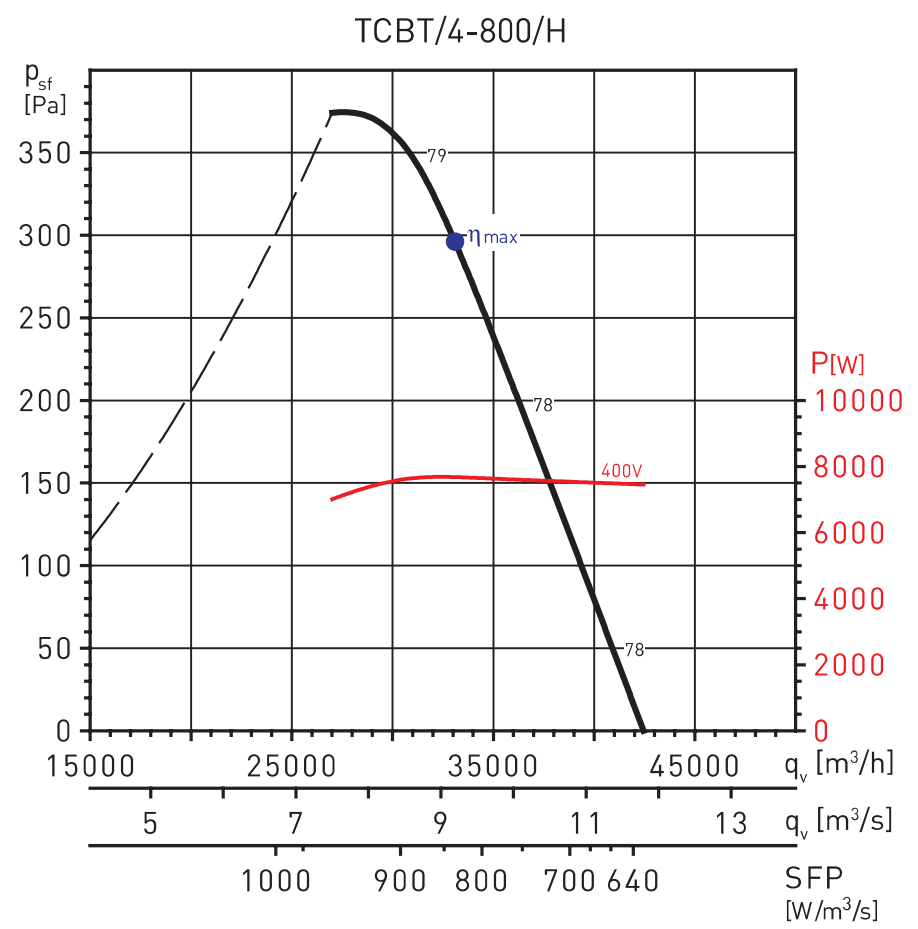
MC	EC	VSD	SR	η [%]	N	[kW]	[m³/h]	[Pa]	[RPM]
D	Total	No	1	61,6	63,4	5,156	28120	406	1445



PERFORMANCE CURVES - 4 POLE MOTORS



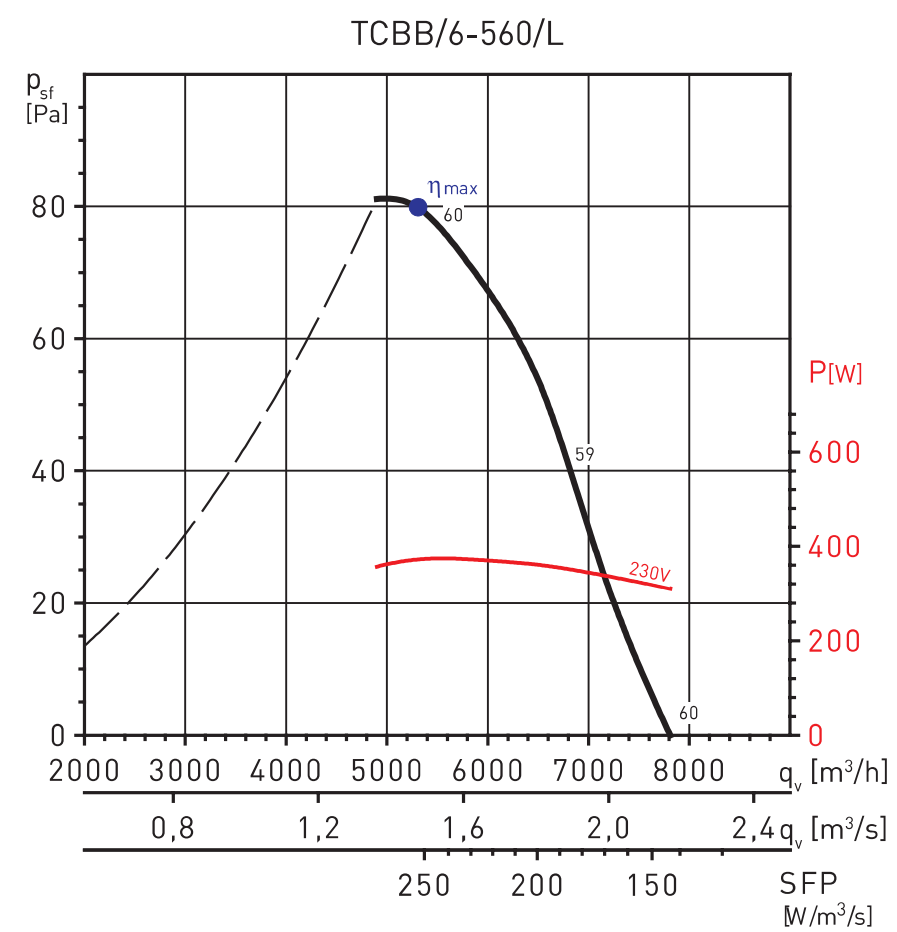
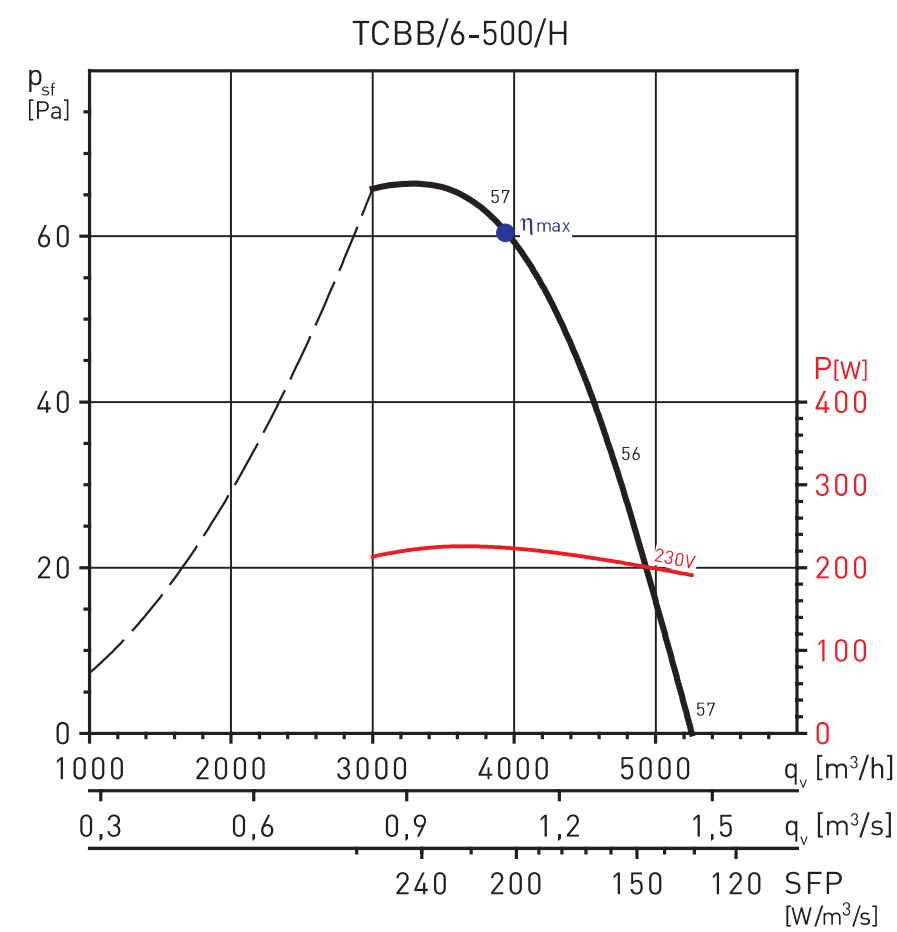
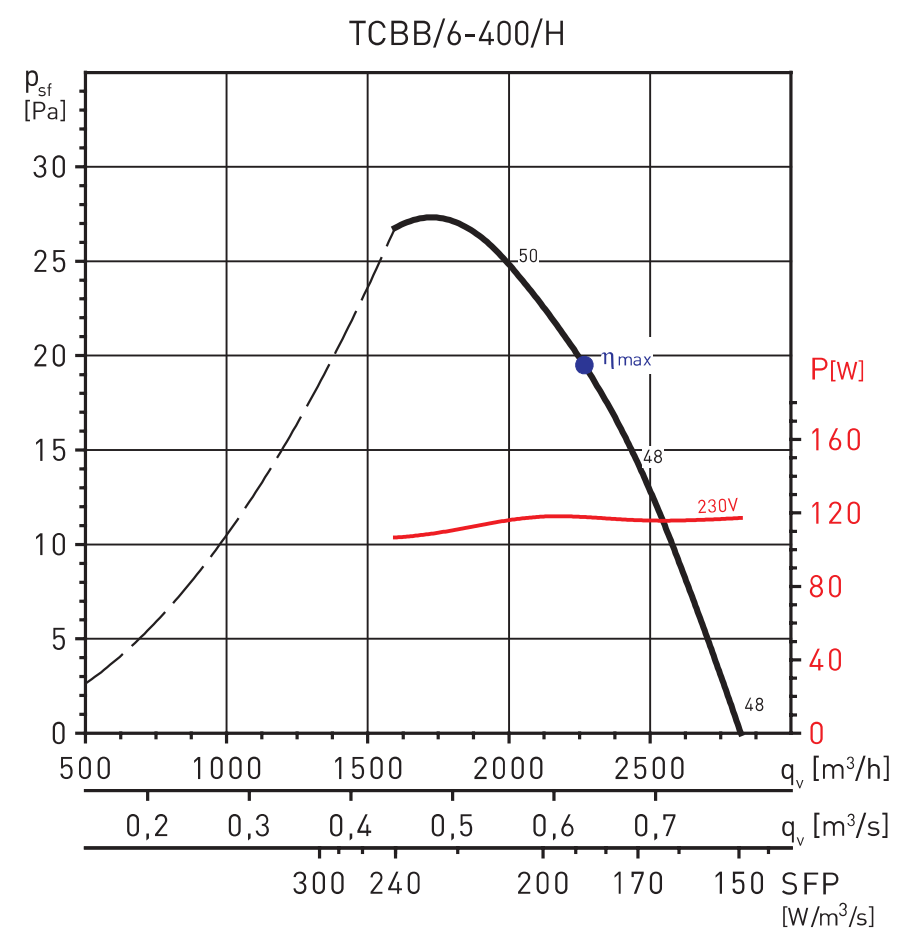
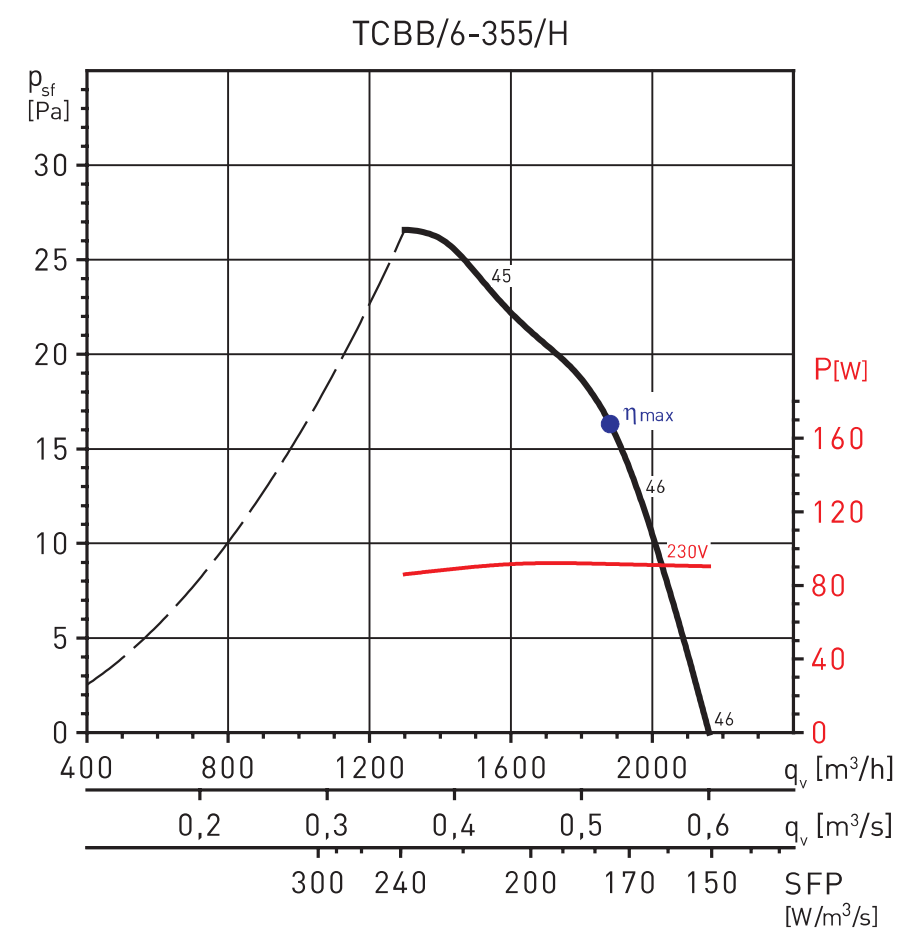
MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
D	Total	No	1	58,9	60,3	6,038	32195	397	1460



MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
D	Total	No	1	59,6	60,3	7,682	33100	498	1468



PERFORMANCE CURVES - 6 POLE MOTORS

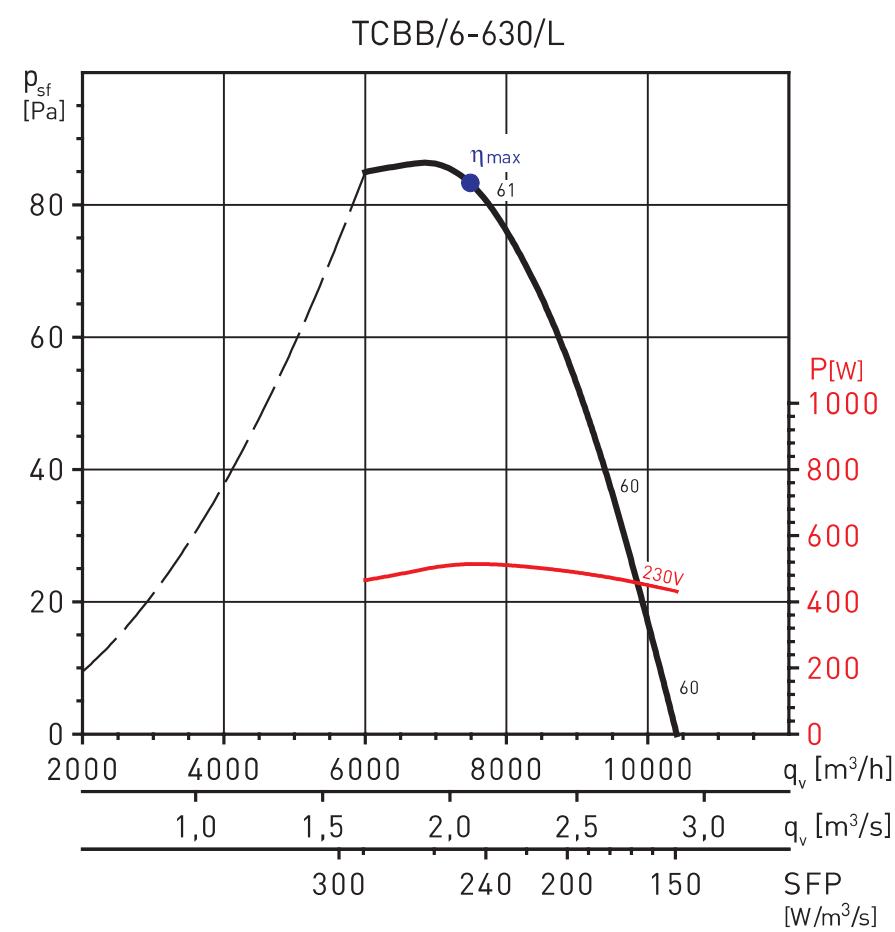


MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
C	Static	No	1	29,6	40,0	0,224	3945	61	886

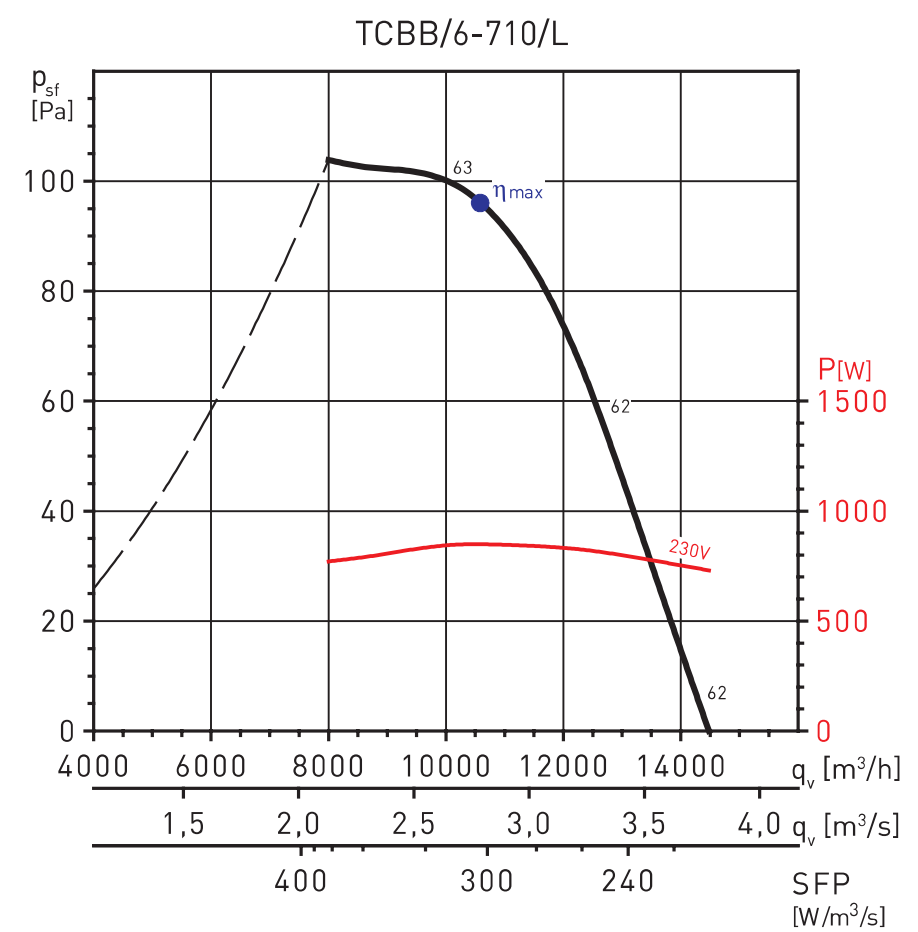
MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
C	Static	No	1	31,6	40,6	0,372	5306	80	894



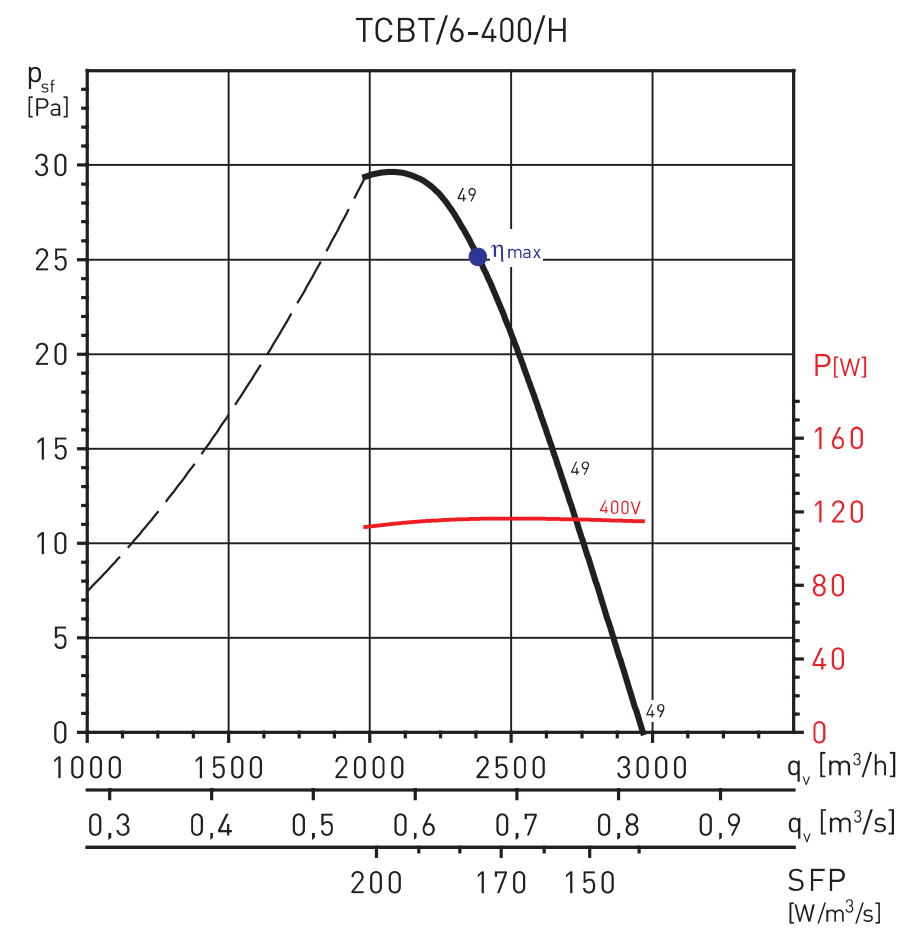
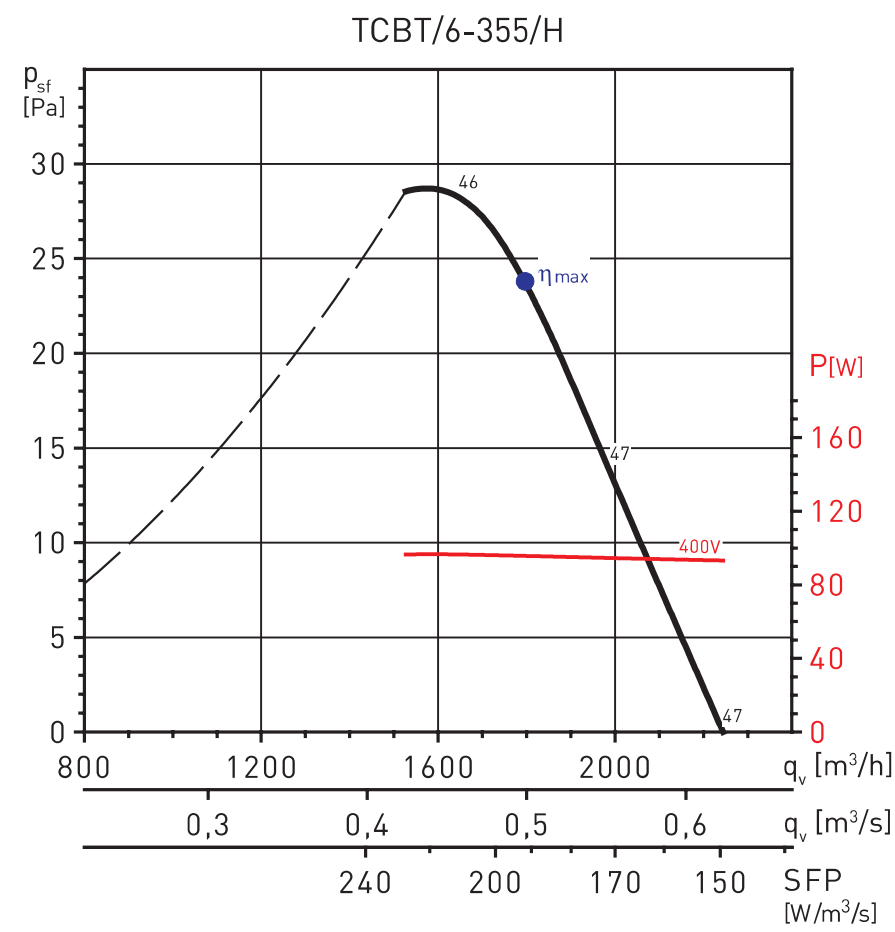
PERFORMANCE CURVES - 6 POLE MOTORS



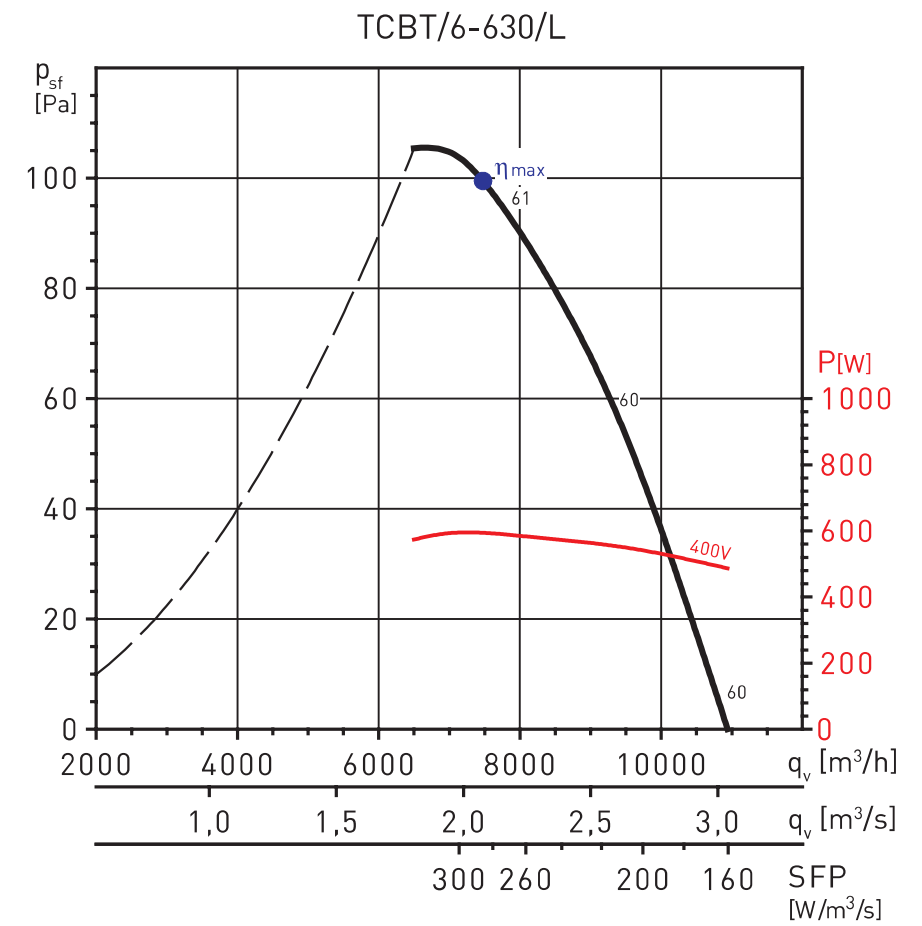
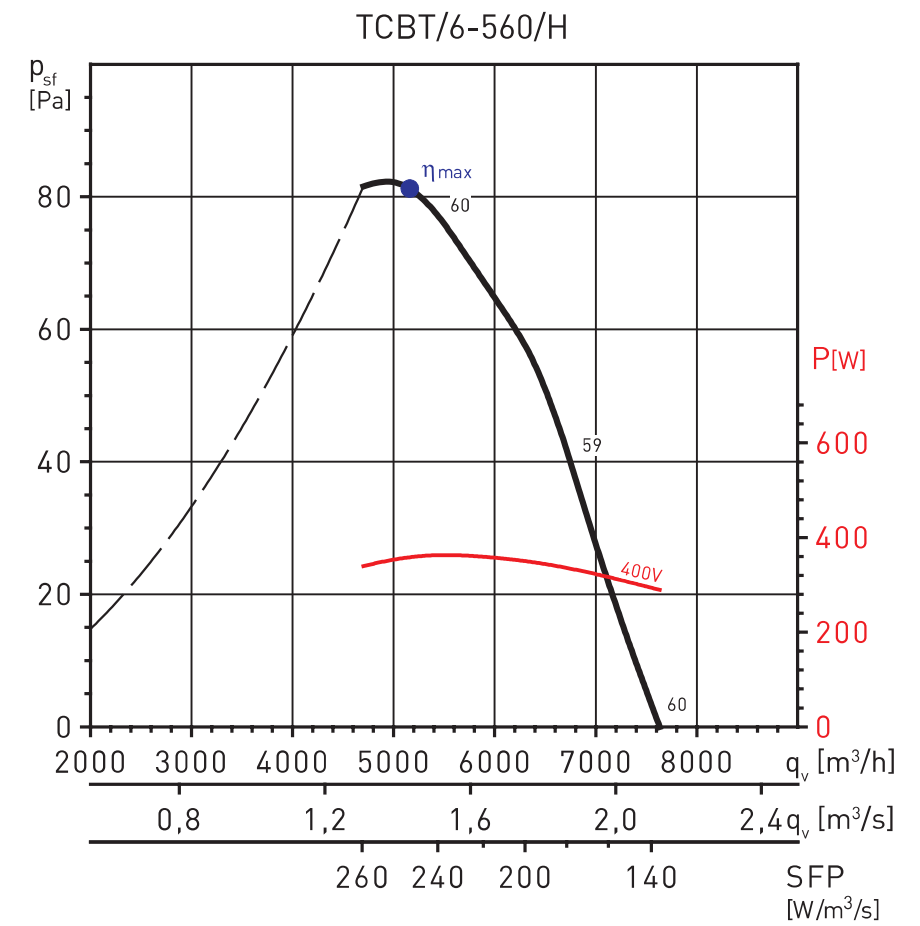
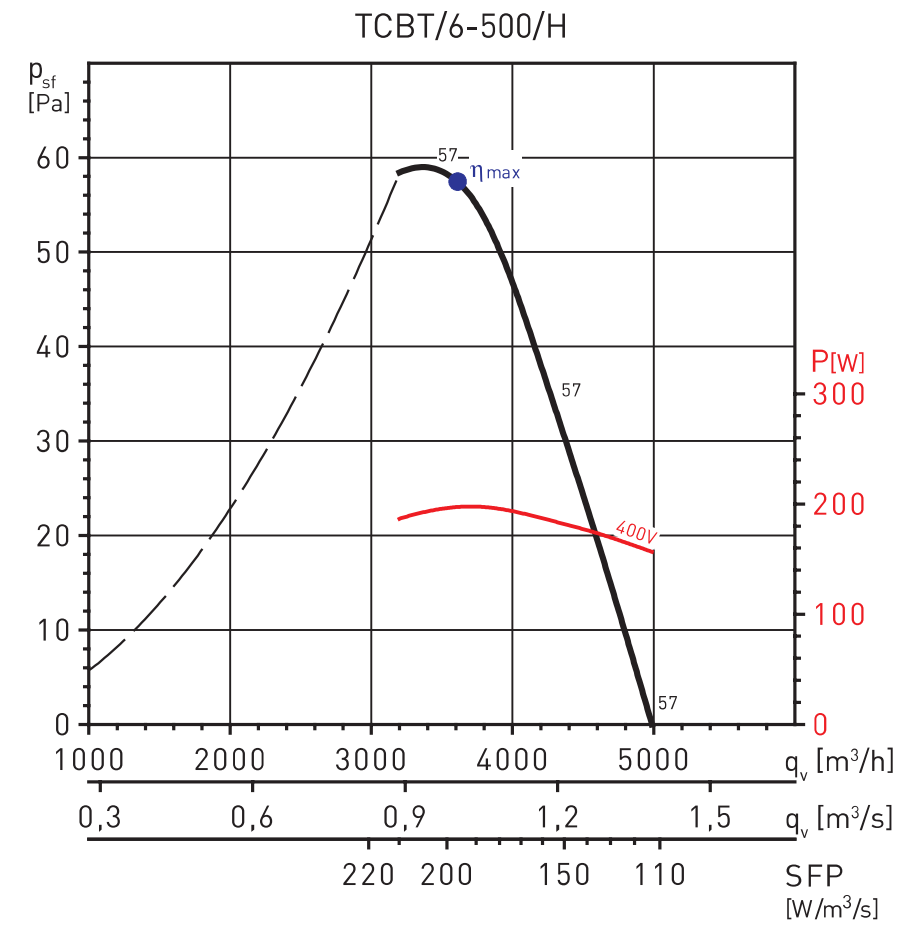
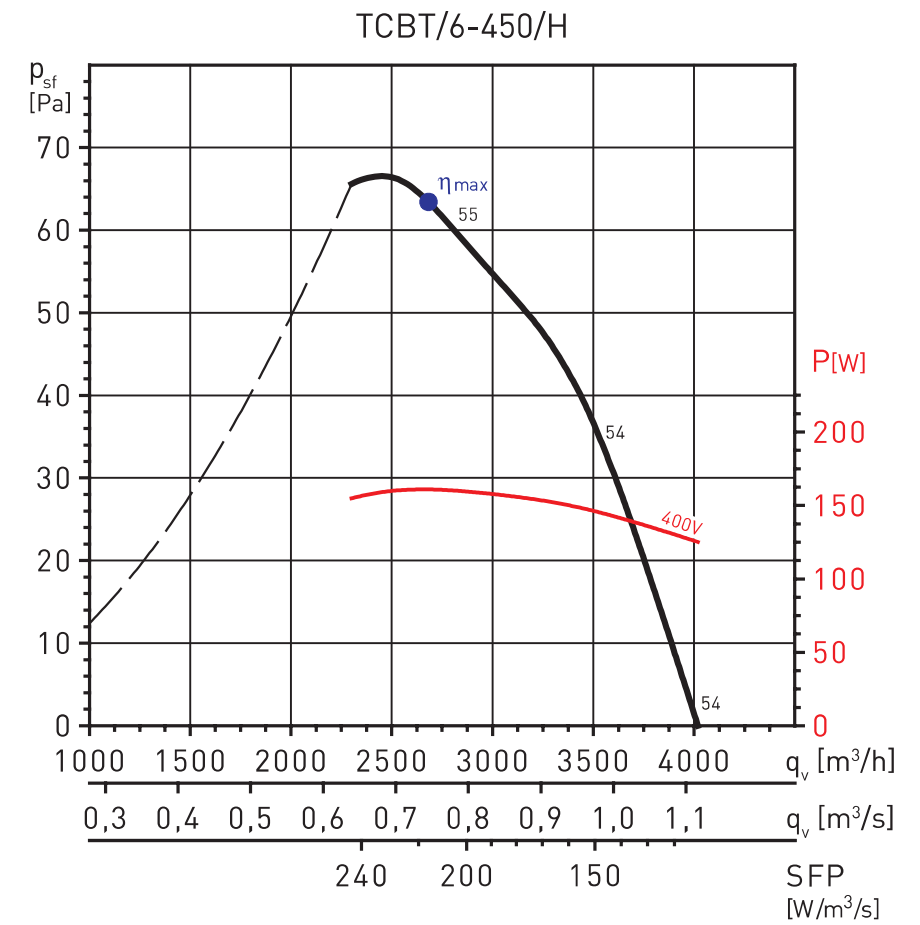
MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
C	Static	No	1	33,7	41,9	0,514	7499	83	889



MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
C	Static	No	1	33,3	40,1	0,849	10587	96	901

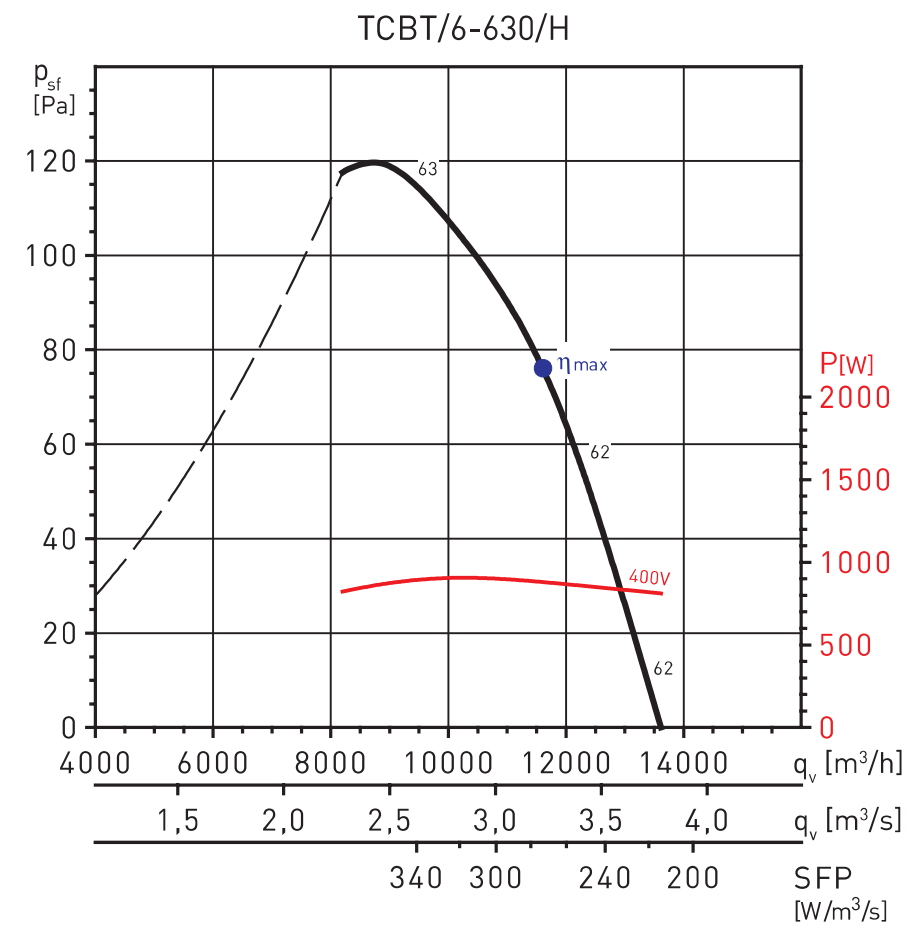


PERFORMANCE CURVES - 6 POLE MOTORS

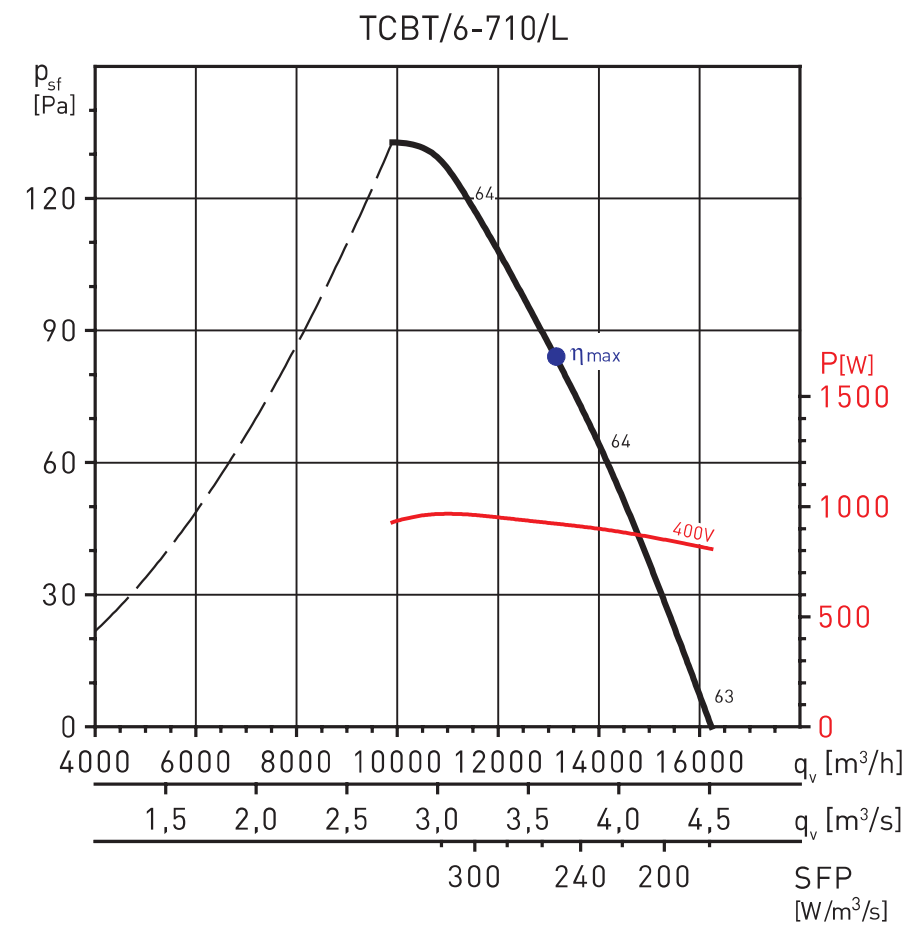




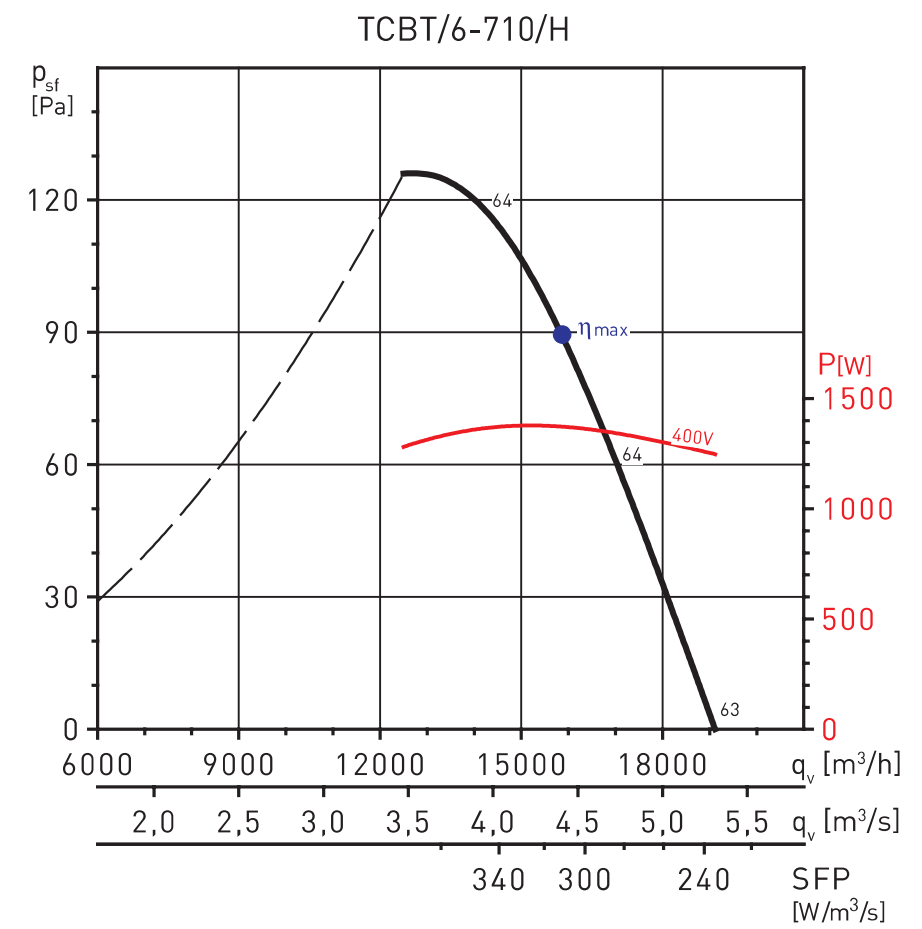
PERFORMANCE CURVES - 6 POLE MOTORS



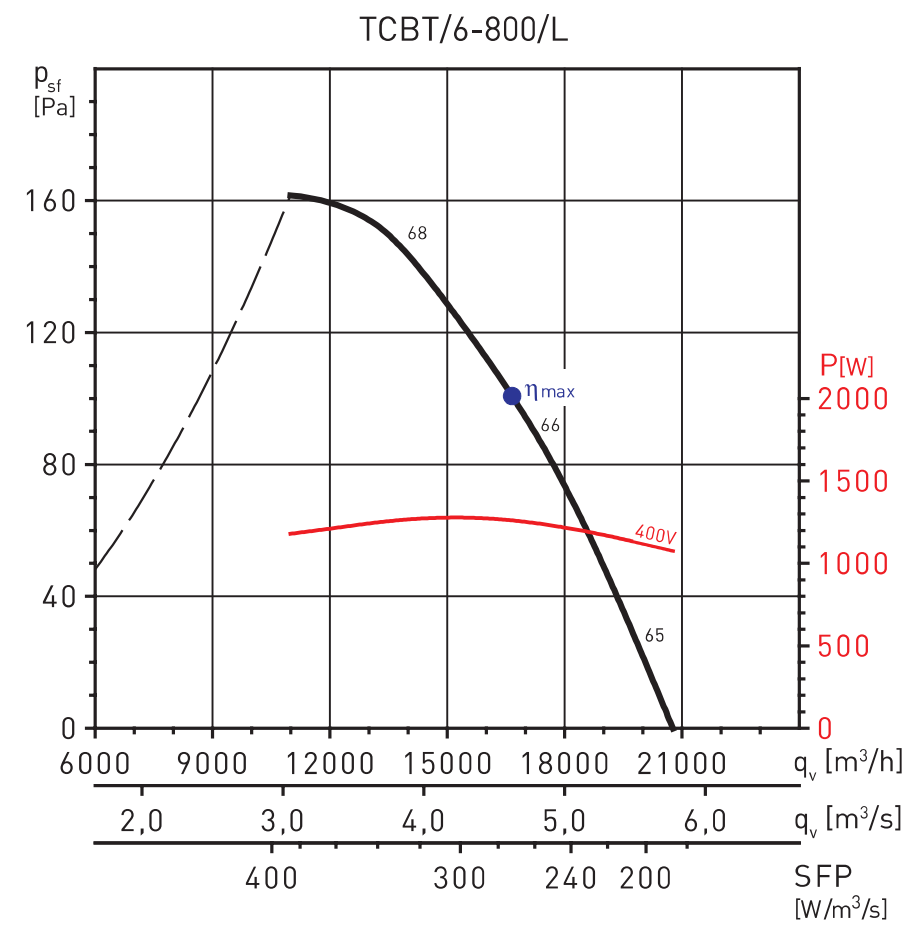
MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
D	Total	No	1	51,7	58,4	0,880	11606	141	949



MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
D	Total	No	1	53,7	60,3	0,921	13209	134	894

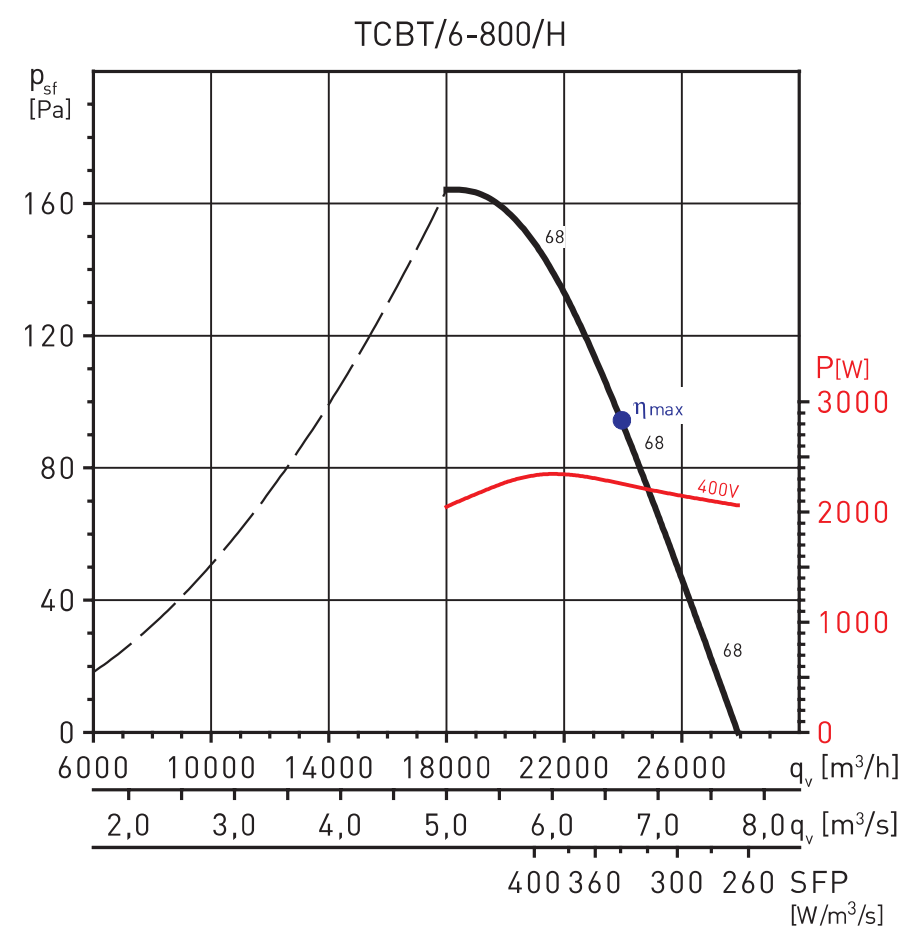
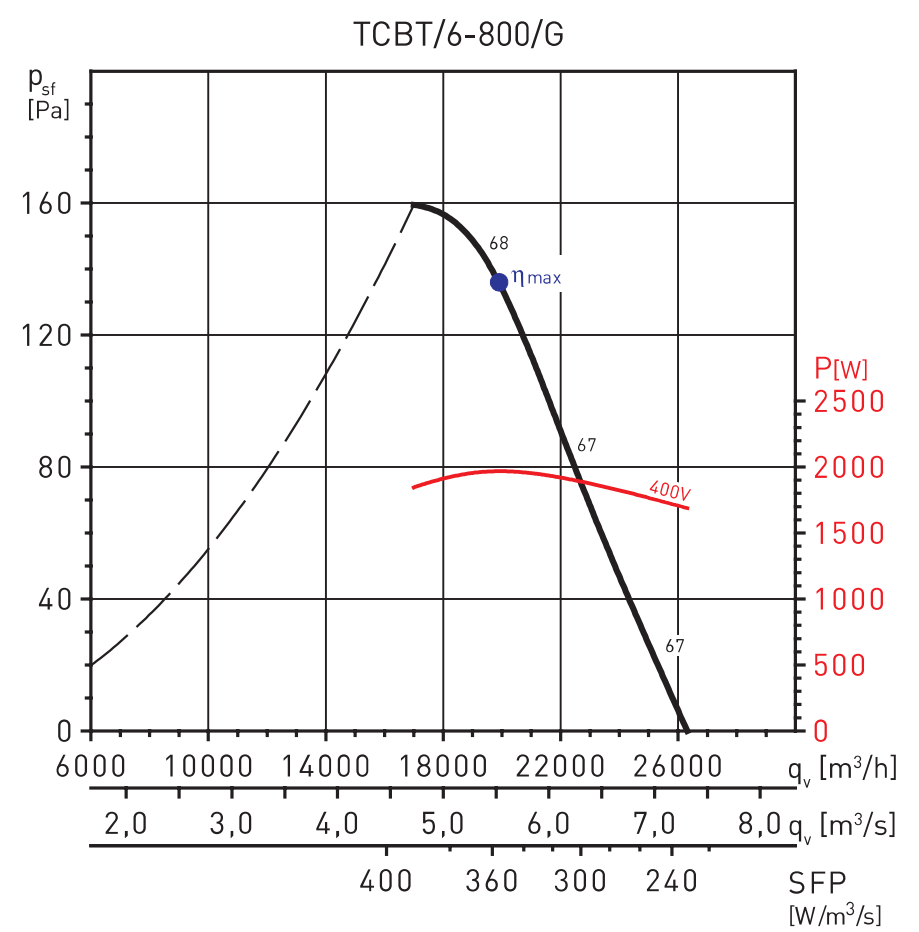
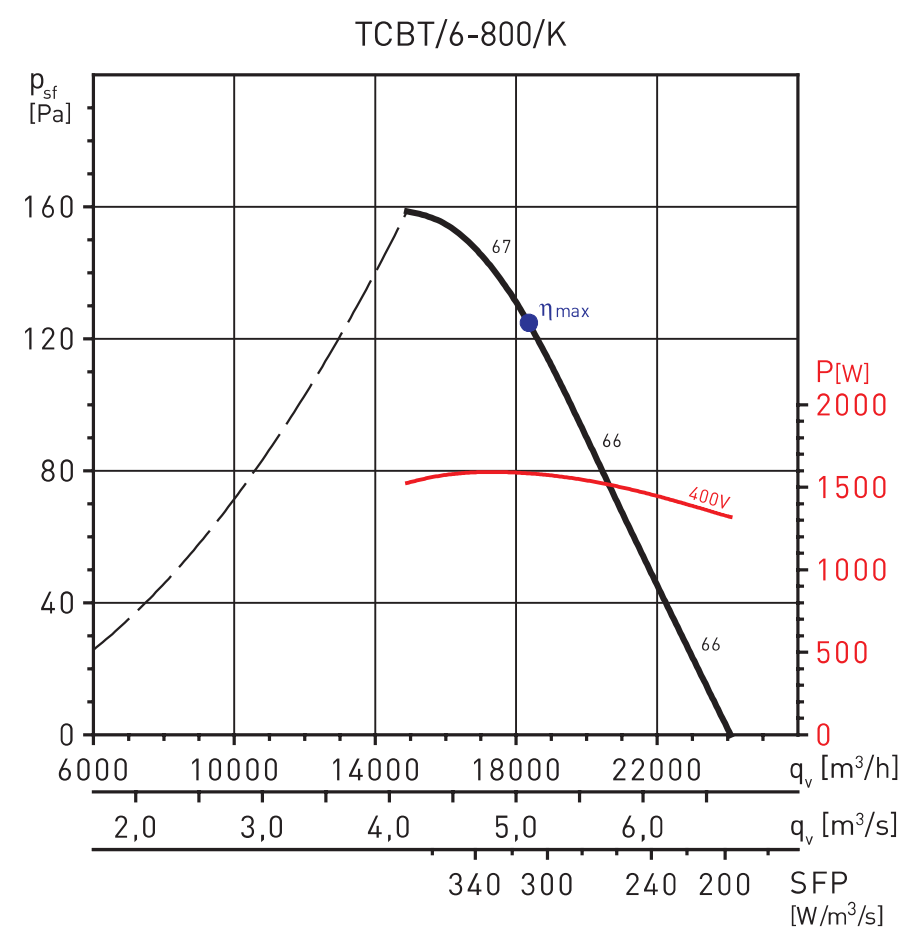


MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
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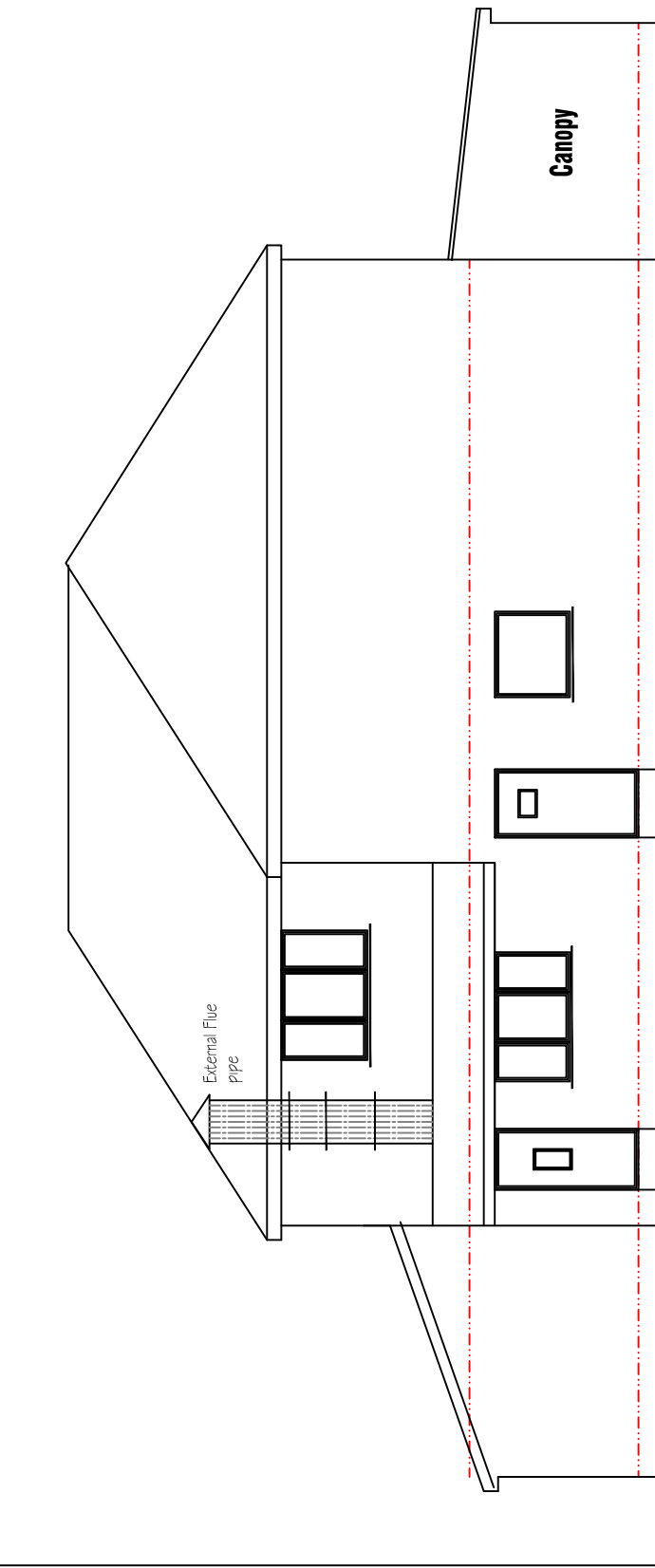


MC	EC	VSD	SR	η [%]	N	[kW]	[m^3/h]	[Pa]	[RPM]
D	Total	No	1	56,0	61,7	1,260	16668	152	955

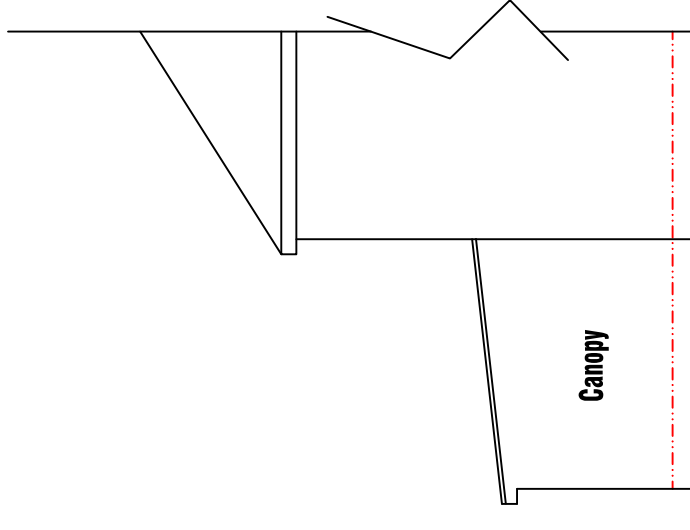
PERFORMANCE CURVES - 6 POLE MOTORS



THE BUILDER MUST CHECK THE SITE AND THE APPROVED DRAWINGS BEFORE COMMENCING THE WORKS AND MUST TAKE ANY WORKING MEASUREMENTS AS NECESSARY. ANY DISCREPANCY IN THE DRAWING MUST BE REPORTED TO THE CLIENT.

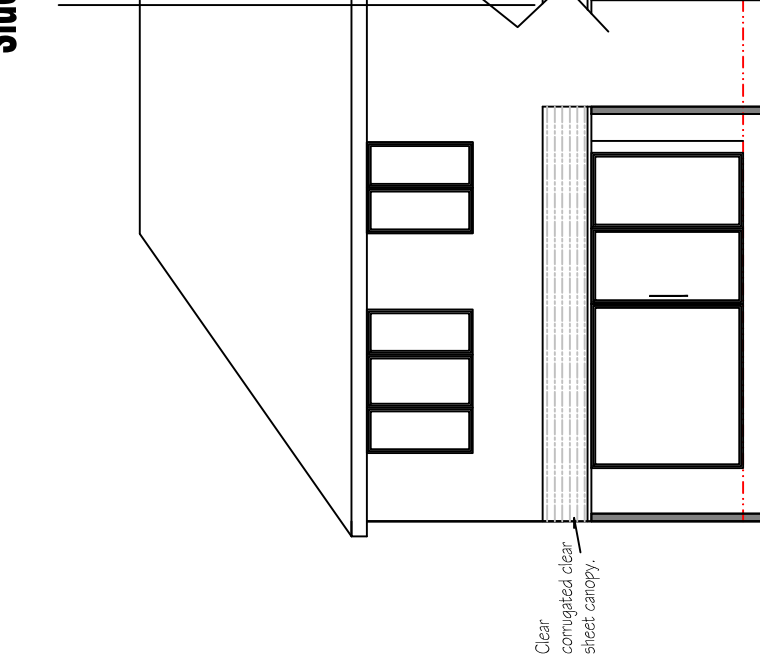


Canopy

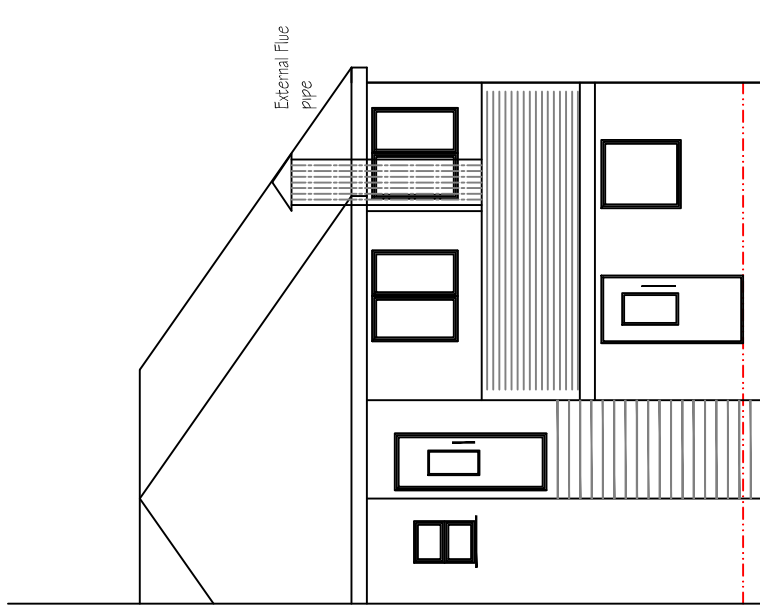


Canopy

Elevation From No 67



Front Elevation



Rear Elevation

Date	Rev	Description
25.9.23	A	Planning

H S H

Engineering Design Services Ltd
428 Creetham Hill Road Creetham Manchester
M8 9LE. UK 0161 7956385, 07940 197 333

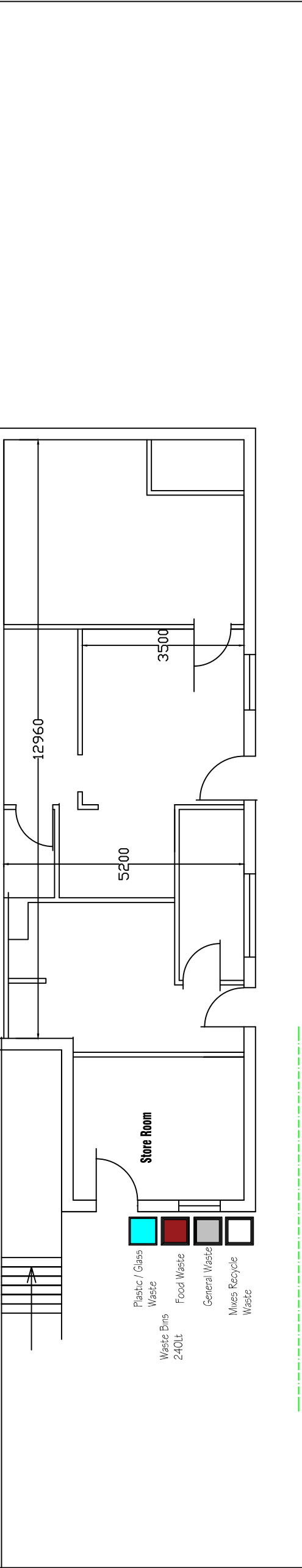
project:	Proposed change of the ground floor from a shop
title:	to restaurant including installation of an external flue pipe.

client	Mr Asim Humza			
dwg. title	Proposed Elevations			
dwg. no.	sheet no.	scale.	job no.	
06A		1:100 @ A3		

65 Windsor Road Pretwich M25 0DB

drawn by.	checked by.	approved by.	date
TZ		-	March 2023

THE BUILDER MUST CHECK THE SITE AND THE APPROVED DRAWINGS BEFORE COMMENCING THE WORKS AND MUST TAKE ANY WORKING MEASUREMENTS AS NECESSARY. ANY DISCREPANCY IN THE DRAWING MUST BE REPORTED TO THE CLIENT .



Site Layout Plan

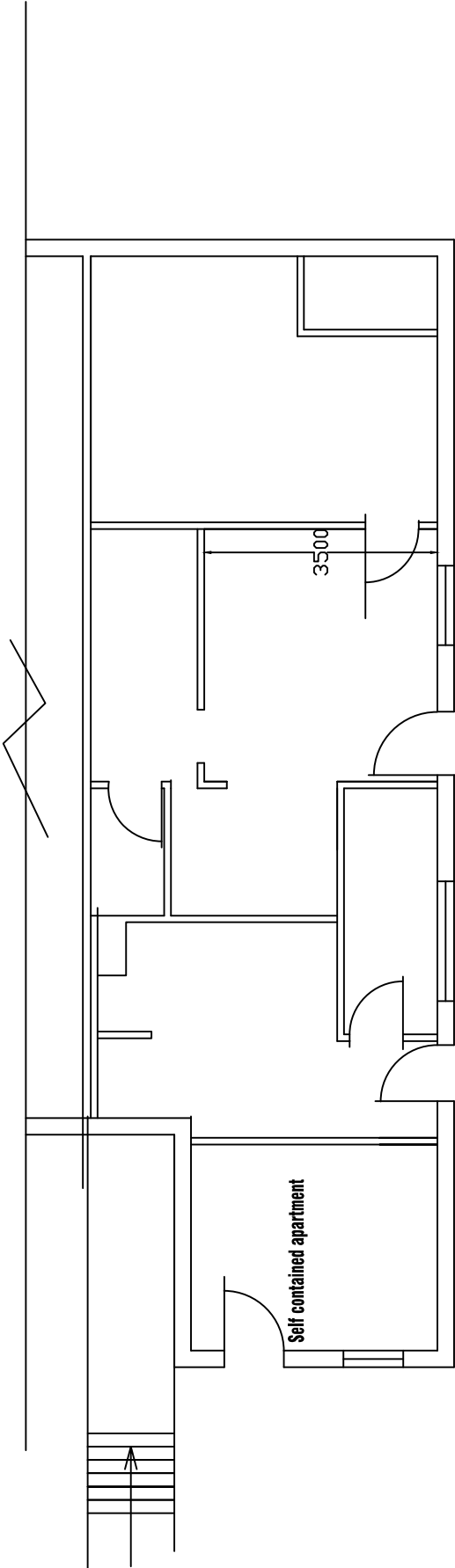
Project title	Proposed change of the ground floor from a shop to restaurant including installation of an external flue pipe.				
Client	Mr Asim Humza				
Divg. title	Bin Location Plan				
Divg. no.	Sheet no.	Scale	Job no.		
07		1:100 @ A3			
65 Windsor Road Pretwich M25 ODB					
Drawn by.	Checked by.	Approved by.	Date		
TZ		-	March 2023		

SITE LOCATION PLAN
AREA 2 HA
SCALE 1:1250 on A4
CENTRE COORDINATES: 383294, 403110



Supplied by Streetwise Maps Ltd
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25/09/2023 12:07

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Site Layout Plan

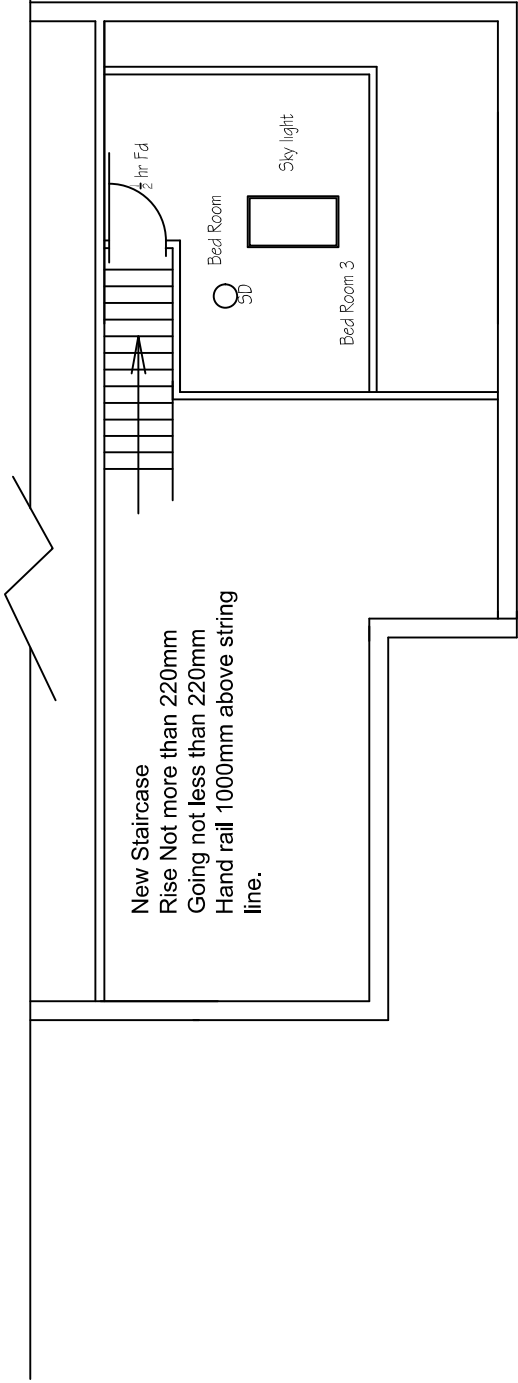
H S H Engineerna Design Services Ltd 428 Cheetham Hill Road Cheetham Manchester M8 9LE. UK 01617956385.07940197 333					
project	Proposed change of the ground floor from a shop				
title	to restaurant including installation of an external flue pipe.				
client	Mr Asim Humza				
dwg. title	Existing Site Layout Plan				
dwg.no.	sheet no.	scale.	job no.		
01		1:100	A3		
65 Windsor Road Pretwich M25 0DB					
drawn by.	checked by.	approved by.	date		
TZ			March 2023		

A floor plan of a house. The layout includes a Living Rm (Living Room) with a sofa and coffee table, a Kitchen with a sink, stove, and refrigerator, a Bed Room 1, and a Bed Room 2. The entrance is on the left, leading to a hallway that connects to the Living Rm, Kitchen, and the two bedrooms. The Living Rm is on the right side of the plan, the Kitchen is in the center, and the two bedrooms are on the left side. The plan also shows a bathroom with a toilet and sink, and a staircase leading up from the hallway.

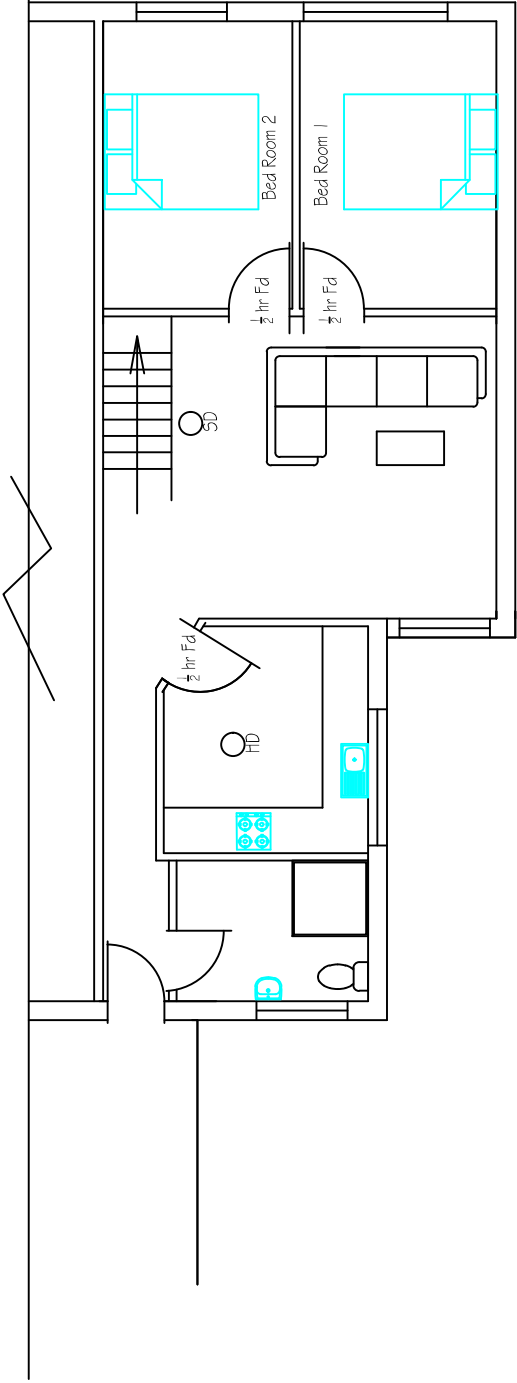
The architectural floor plan shows a building layout with two main sections: a **Shop** on the left and a **Self contained apartment** on the right. The **Shop** section includes a large open area, a room with a toilet and sink, and a room with a bathtub. The **Self contained apartment** section includes a large open area, a room with a bathtub, and a room with a toilet and sink. A red line runs through the center of the plan, starting from the top left, passing through the **Shop** section, and ending in the **Self contained apartment** section. The red line is labeled **Beam 1**, **Beam 2**, **Beam 3**, **Beam 4**, **Beam 5**, and **Beam 6**. A blue line is also shown, running horizontally across the middle of the plan. A staircase is located at the bottom left of the plan, with an arrow pointing upwards. The plan also shows various doors, windows, and structural elements like walls and columns.

[illegible]

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2nd Floor Plan



1st Floor Plan

H S H

Engineering Design Services Ltd
428 Cheetham Hill Road Cheetham Manchester
M8 9LE UK 01617956385,07940197 333

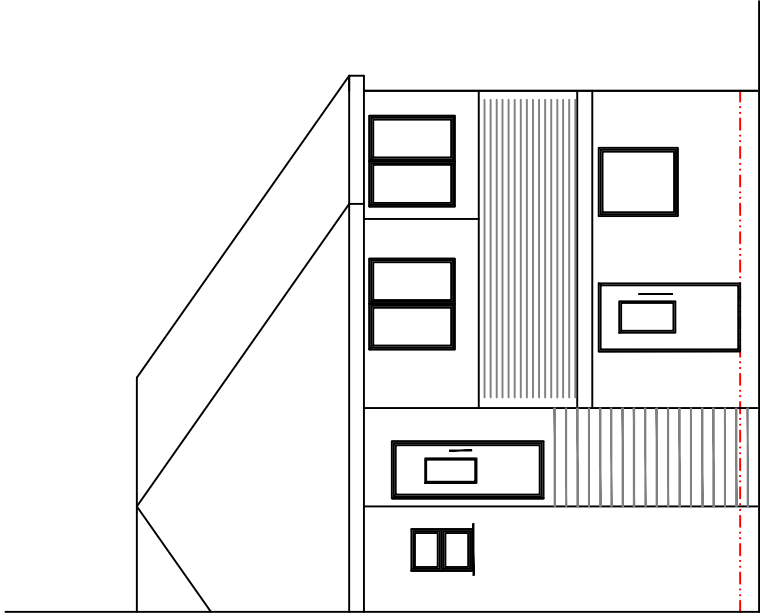
Project title

Proposed change of the ground floor from a shop to restaurant including installation of an external flue pipe.

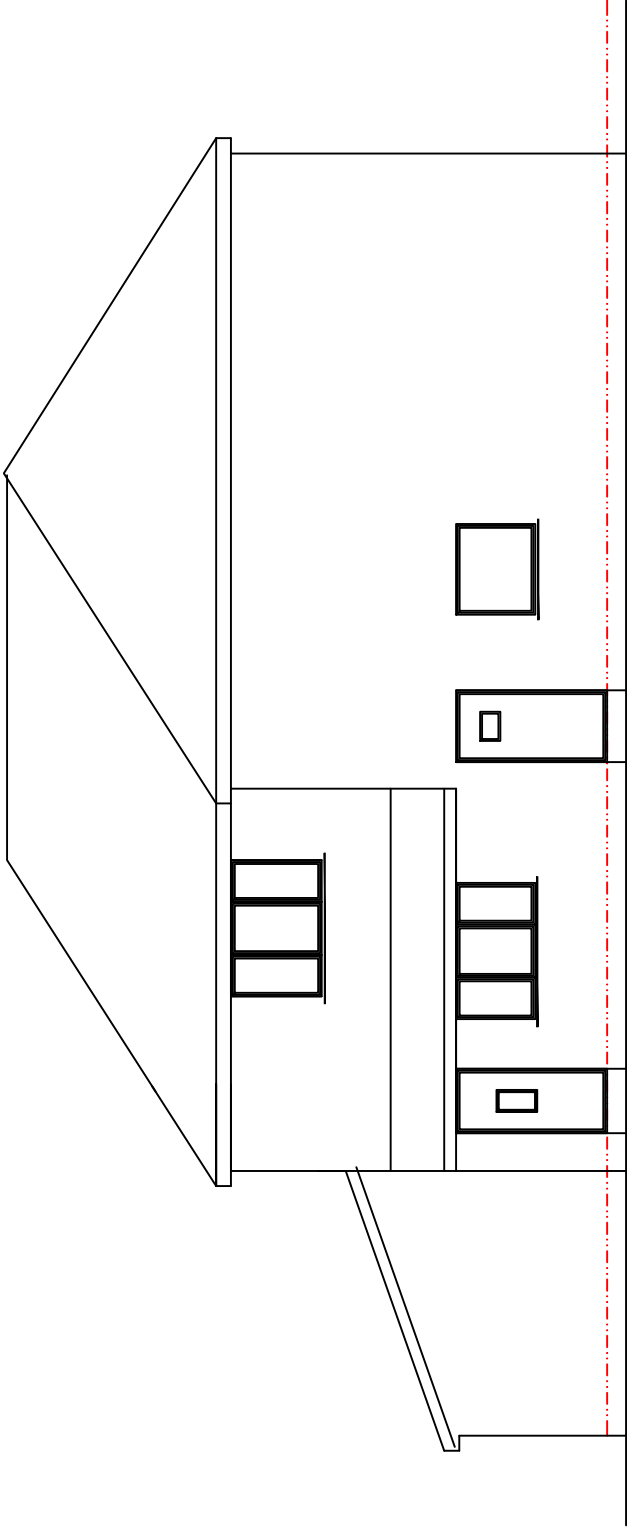
client	Mr Asim Humza		
dwg. title	Existing Plan		
dwg.no.	sheet no.	scale.	job no.
03		1:100	A3
65 Windsor Road Pretwich M25 0DB			

drawn by.	checked by.	approved by.	date
TZ			March 2023

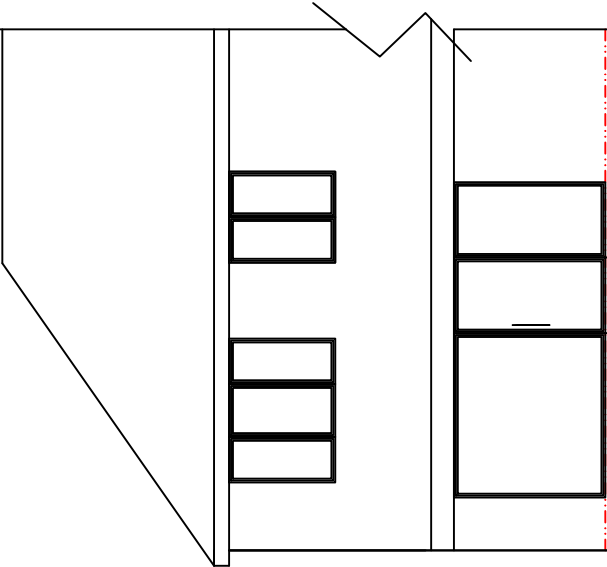
THE BUILDER MUST CHECK THE SITE AND THE APPROVED DRAWINGS BEFORE COMMENCING THE WORKS AND MUST TAKE ANY WORKING MEASUREMENTS AS NECESSARY. ANY DISCREPANCY IN THE DRAWING MUST BE REPORTED TO THE CLIENT .



Rear Elevation



Side Elevation



Front Elevation

Date	Rev	Description
07/06/23	A	Planning

H S H

Engineering Design Services Ltd
426 Cheetham Hill Road, Cheetham Manchester
M8 9LE, UK 01 61 7956385, 07940 197 333

Project title
Proposed change of the ground floor from a shop to restaurant including installation of an external flue pipe.

Client
Mr Asim Humza

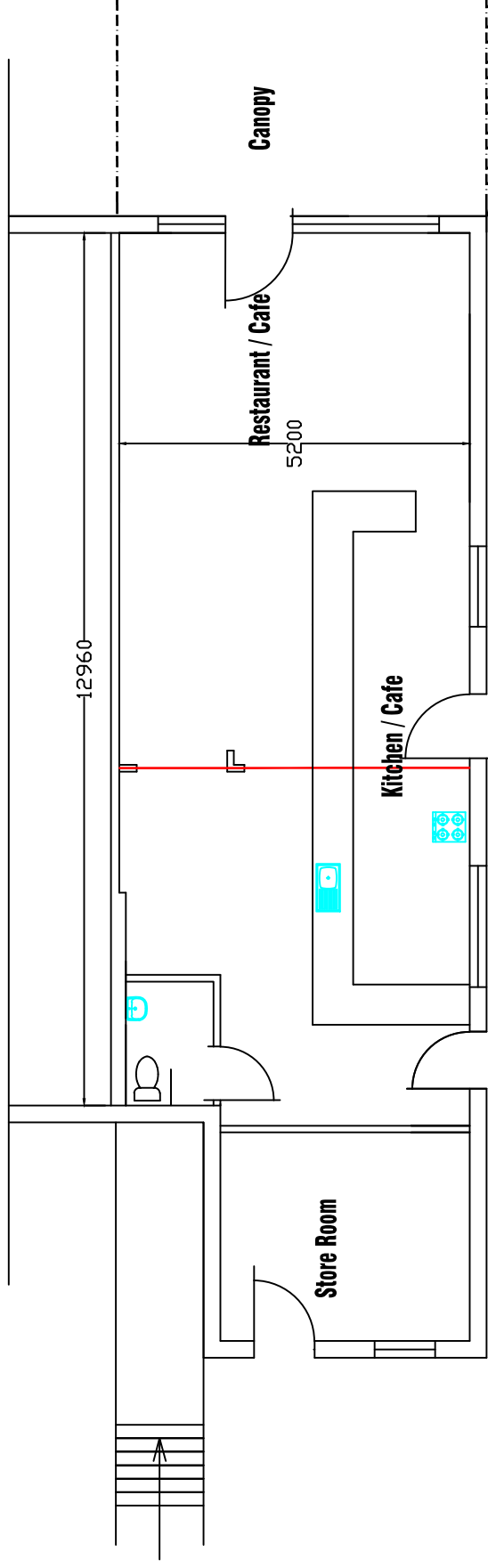
Existing Elevations			
dwg. title	sheet no.	scale	job no.
04a		1:100 @ A3	

65 Windsor Road, Pretwich M25 0DB

drawn by:	checked by:	approved by:	date
TZ			March 2023

This floor plan shows a 2-bedroom apartment. The layout includes a large living room with a sofa and coffee table, a kitchen with a sink, stove, and refrigerator, and two bedrooms. The entrance features a set of stairs leading up. The plan is oriented vertically, with the entrance at the bottom.

1st Floor Plan



Ground Floor Plan

Date	Rev	Description	
25.9.23	A	Planning	
 H S H Engineering Design Services Ltd 428 Cheetham Hill Road Cheetham Manchester M8 9LE UK 0161 7956385.07940197 333			
project title		Proposed change of the ground floor from a shop to restaurant including installation of an external flue pipe.	
client		Mr Asim Humza	
dwg. title		Proposed Plans	
dwg. no.	sheet no.	scale.	job no.
05A		1:100 @ A3	
65 Windsor Road Pretwich M25 0DB			
drawn by.	checked by.	approved by. date	
TZ		March 2023	



Stainless Steel Fabrication

Commercial Kitchen Design and Installation

System Maintenance

It is important that the system is well maintained in order to operate a system that is functional on providing a high level of performance.

Maintenance requirements will vary, subject to the intensity of use and type of cooking. Therefore, frequency of cleaning and filter replacement will be adjusted to suit. The Tenant will ensure the following minimum levels of maintenance are adhered to.

The most advanced filtration systems and ductwork designs will quickly become completely ineffective at mitigating grease, smoke and odour, when the detailed maintenance regime is not followed the table below provides requirements for the type and frequency of maintenance in accordance with EMAQ guidelines.

We would recommend the following in accordance with BESA TR19 guidance guidelines on cleaning and maintenance.

Cleaning of ductwork – 1 month Heavy use 3 months Medium use and every 6 months light use.

Canopy on each session before or after session

G4 filters every 3 weeks or if system seems to have reduced suction/ performance (Extract & Supply) **if installed**

Cleaning baffle filters – after each service

Carbon filters – 3 months heavy use 6 months medium use 8 month light use. **If Installed**

Extract— 1 Month heavy used 3 Months moderate use 6 Months light use.

Extract full services – 12 months. For your insurance this is required

ESP Filter changing/cleaning – 3 months heavy use 6 months medium use 8 months light use. **If Installed**



Stainless Steel Fabrication
Commercial Kitchen Design and Installation

Unit5 Firefly Square Plantation Road Burscough Industrial Estate L40 8JT

VAT No. 245073616

Tel: 01704-893945 Fax: 0844-4122296

Email: fusionhot1@gmail.com Web: www.FusionHot.co.uk



Stainless Steel Fabrication

Commercial Kitchen Design and Installation

Kitchen extract component	Recommended maintenance intensity
Grease Smoke and Solid Filtration	
Grease filter – mesh/baffle/cartridge/water wash	Daily cleaning
Canopy UV	Quarterly clean replace lamps after 8000 hours of operation
Cold water mist hood	Daily cleaning
Electrostatic Precipitation	Clean every 4 weeks
Low intensity odour control	
3 stage fine filters	Replacement every 2 weeks or replace when system is reduced performance
Odour control	
UV odour control	Clean every 4 weeks annual lamp replacement
Ozone Injection unit	self-sufficient no need to clean
Ozone generation unit	No need to clean out of airstream
Adsorption activated carbon filter	3 to 5 months filter replacement of when system has reduced performance

Usage	Frying time	Minimum clean frequency
Heavy Use	12-16 hours per day	3 Monthly
Moderate use	6-12 hours per day	6 Monthly
Low Use	2-6 hours per	12 Monthly

All duct work should be cleaned by a qualified tr19 person, who should issue a certificate after cleaning, this is important for your insurance.

Please note these are only guidelines as all systems are designed differently



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Commercial Kitchen Design and Installation

Unit5 Firefly Square Plantation Road Burscough Industrial Estate L40 8JT

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Tel: 01704-893945 Fax: 0844-4122296

Email: fusionhot1@gmail.com Web: www.FusionHot.co.uk

TERMS AND CONDITIONS

By ordering the goods you agree to be bound by our terms and conditions below and recognise the services/products we have not included in our quotation for you unless otherwise stated.

- Ventilation system to EMAQ Guidelines (subject to further quotation).
- Odour control.
- Noise management.
- Fire rated ductwork.
- Fire rated insulation.
- Fire rating of walls that ductwork passes through.
- Planning permission (client's responsibility – work will not start without sufficient authority approval).
- Hanging of canopies over 4500mm from FFL.
- Infill panels to make good between the top of the canopy and ceiling.
- Masking gaps that occur during canopy installation due to inaccuracies in the building structure.
- Any specialist fixings to suit building structure.
- Balancing and commissioning of canopies.
- All electrical works.
- Final electrical connections and controls commissioning.
- Gas works including gas valve (interlock).
- Pipe work and inclusion of valves.
- Builders works and weather proofing of openings (scaffolding or lifting equipment).
- Structural works to roof area.
- Protection to flooring internal.
- Lifting of plant to roof level / scaffolding.
- Edge protection.
- Thermal insulation.
- Boarding to ceiling void areas.
- Canopy protection on completion of installation.
- Fire suppression.
- Strip out / Removal of existing canopies / ductwork.
- Any items not specifically itemized within your quotation are excluded.
- Earth bonding.
- Out of hours working (Normal working hours being Mon-Fri 8.30-5.30pm excluding bank holidays, hours include travelling time) any extra hours due to any unforeseen circumstances will be charged at £50ph payable direct to fitters.
- Notifications to local authorities, building, planning, fire etc.
- Builders, joiners, scaffolding, electrical, plumbing, roofing works.
- Waterproofing of walls and roofs where ductwork terminates exits (roofer will be required to seal roofs).
- Ductwork insulation.
- Inspection hatches to TR19 to be installed by others.
- Extraction canopy fan/speed control wiring to mains/board.
- All new fans are covered under manufactures warranty if claiming for a fault a new fan must be purchased and the fan in question sent back to the manufacture for inspection at your cost, if fan is found at fault under warranty, they will reimburse the cost of the fan.
- Fan inspection and warranty call outs to inspect/replace fans are not covered, and labour costs paid by the client.
- Extraction fan / controller fail due to incorrect wiring, replacement parts to be paid by client and parts send back to manufacturer for inspection at clients cost.
- Heater battery for air input system.
- Provision of grease traps if required.
- Finding of asbestos all works must stop until made safe by others.
- Return visit to site due to services being incorrect or not live and enabled for commissioning, a chargeable site instruction. would be required for any visits beyond our control.
- We specifically exclude any works not mentioned.
- VAT.
- Once payment made any refund will be subject to a 25% restocking charge and fee incurred.
- The company (FUSIONHOT LTD) is suppliers. Fitting is carried out by a third-party company and is the customer's responsibility to check all relevant details of that company, any problems with the fitting is between the customer and the third-party company. All correspondence should be between these two and not FUSIONHOT LTD.