

Contents

Tube and Circular Box Fans

Espada Range

Espada - Introduction.....	1
Espada - Electrical Details and Sound Levels.....	2
Espada - Drawings and Dimensions.....	2
Espada - Wiring Diagram.....	2
Espada - Performance Data	3-6

Ropera Range

Ropera - Introduction.....	7
Ropera - Electrical Details and Sound Levels.....	8
Ropera - Drawings and Dimensions.....	8
Ropera - Wiring Diagrams	8
Ropera - Performance Data	9-14

Ropera EC Range

Ropera EC - Introduction	15
Ropera EC - Electrical Details and Sound Levels	16
Ropera EC - Drawings and Dimensions	16
Ropera EC - Wiring Diagrams	16
Ropera EC - Performance Data.....	17-18

Accessories

Tube and Circular Box Fan

BDS - Back Draught Damper	33
MFE - Mounting Bracket	33
CFB - Filter Box incl. Filter	34
CSA - Sound Attenuator	34
MFR - Foot.....	35
CFC - Duct Clamps.....	35
CIG - Protection Guard	36
FLS - Plastic Shutter	36

AIRTREND Ltd.
Predstavništvo u Beogradu
Kumanovska 14, 11000 Beograd
Tel: 011/3836886, 3085740
Faks: 011/3444113
e-mail: gobrid@eunet.rs
web: www.airtrend.rs

Tube Fans - ESPADA Range



Features

- 100 mm to 315 mm diameter
- Air flow 1800 m³/h (0.5 m³/s)
- Static pressures up to 720 Pa
- Plastic cased centrifugal fan
- Low noise levels
- Completely corrosion resistant
- Easy electrical connection via terminal box
- Backward curved impeller

Electrical Supply

220 - 240V / 50Hz / 1 Ph

Sizes

100, 125, 150, 160, 200, 250 and 315

Features and Construction

The casings of sizes 100 - 315 are equipped with an attractive, impact resistant and inflammable plastic casing with integrated IP44 terminal box and guide vane. On fans sizes up to 250 mm the impeller is made of plastic the 315 is made of galvanised steel.

Installation

Rigid folded spiral-seam ducts (Spiro), flexible aluminium or plastic ducts with standardised diameter can be used.

Wiring

Insulation class F with additional moisture protection impregnation and thermal contacts which are connected in series with the windings of the motor.

Speed Controllers

Speed is 100% infinitely variable using auto transformers or electronic control (please see page 99).

Product Code

ESPADA 100 (L)

- ESPADA = Product Name
- 100 = Diameter size
- L = (optional, larger motor)

Accessories

The range of accessories include duct clamps, filters, guards, dampers, silencers, mounting brackets, shutters. A quick reference guide is shown below. For full details on these items please see pages 33-36.



CFC



BDS



FLS



CSA



MFR



CFB



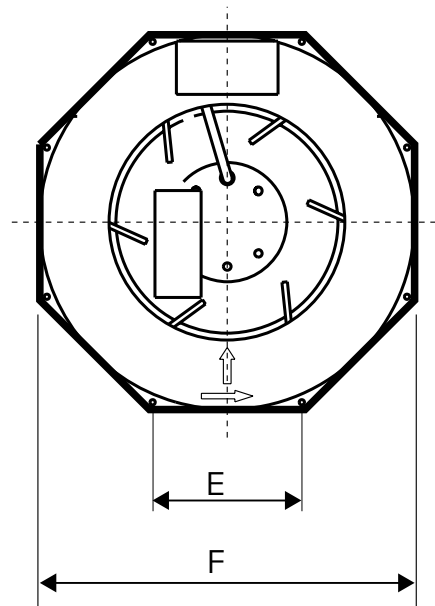
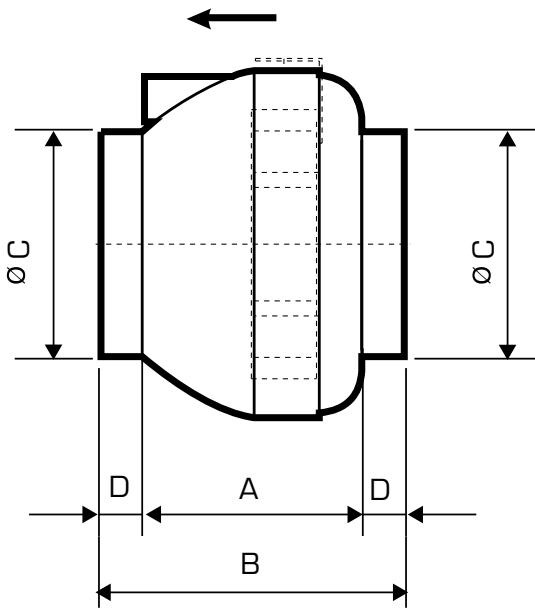
CIG

Electrical Details and Sound Levels

Product Code	Product Number	Speed rpm	Motor Frame	Electrical Supply	Electrical Current			Wiring Diagrams	Maximum Operating Temp °C	Breakout *Sound Level db(A) (3m)	**Speed Controllers	
					Motor (kW)	Full Load Current (A)	Starting Current (A)				Electronic	Transformer
ESPADA 100L	TF100022	2480	Integral	220-240V/50Hz/1Ph	0.065	0.3	0.45	CD3004	70	31	✓	✓
ESPADA 125L	TF125022	2415	Integral	220-240V/50Hz/1Ph	0.065	0.3	0.45	CD3004	70	31	✓	✓
ESPADA 150	TF150022	2400	Integral	220-240V/50Hz/1Ph	0.07	0.3	0.45	CD3004	70	30	✓	✓
ESPADA 160	TF160020	2400	Integral	220-240V/50Hz/1Ph	0.07	0.45	0.68	CD3004	70	30	✓	✓
ESPADA 160L	TF160022	2440	Integral	220-240V/50Hz/1Ph	0.115	0.49	0.74	CD3004	50	34	✓	✓
ESPADA 200	TF200020	2395	Integral	220-240V/50Hz/1Ph	0.115	0.75	1.13	CD3004	50	31	✓	✓
ESPADA 200L	TF200022	2540	Integral	220-240V/50Hz/1Ph	0.16	0.7	1.19	CD3004	55	36	✓	✓
ESPADA 250	TF250020	2450	Integral	220-240V/50Hz/1Ph	0.115	0.75	1.13	CD3004	50	31	✓	✓
ESPADA 250L	TF250022	2560	Integral	220-240V/50Hz/1Ph	0.16	0.65	1.17	CD3004	55	34	✓	✓
ESPADA 315	TF315020	2540	Integral	220-240V/50Hz/1Ph	0.22	1.8	3.42	CD3004	55	34	✓	✓
ESPADA 315L	TF315022	2390	Integral	220-240V/50Hz/1Ph	0.3	1.3	2.21	CD3004	45	37	✓	✓

*Sound power levels are average dBA at 3 metres distance over sphere, under free field conditions and are presented for comparative purposes only. Values taken at the mid point on the wave at the highest point. **For speed controllers, please see page 99.

Drawings and Dimensions



Wiring Diagram

CD3004



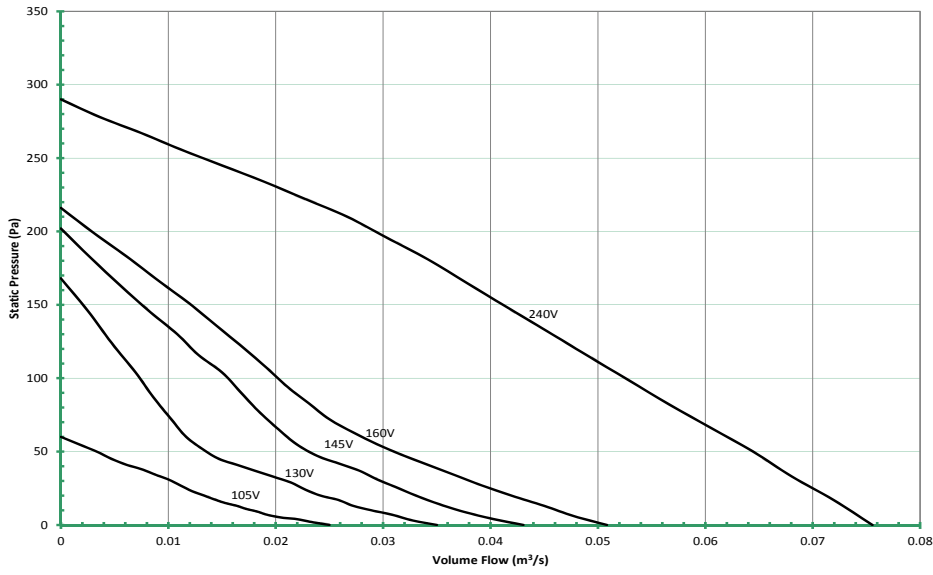
Product Code	A	B	C	D	E	F	Weight (Kg)
ESPADA 100L	160	220	100	30	97.6	245	2.4
ESPADA 125L	160	220	124	30	97.5	245	2.4
ESPADA 150	170	230	149	30	135.7	340.5	3
ESPADA 160	170	230	159	30	135.7	340.5	3
ESPADA 160L	170	230	159	30	135.7	340.5	3.2
ESPADA 200	170	230	199	30	135.7	340.5	3.4
ESPADA 200L	170	230	199	30	135.7	340.5	3.7
ESPADA 250	170	230	249	30	135.7	340.5	3.4
ESPADA 250L	170	230	249	30	135.7	340.5	3.7
ESPADA 315	215	275	314	30	160.7	405	5.7
ESPADA 315L	215	275	314	30	160.7	405	5.8

For Specific Fan Power (SPF) contact Fläkt Woods or download the Fläkt Woods Fan Selector at: www.falctwoods.com/fanselector

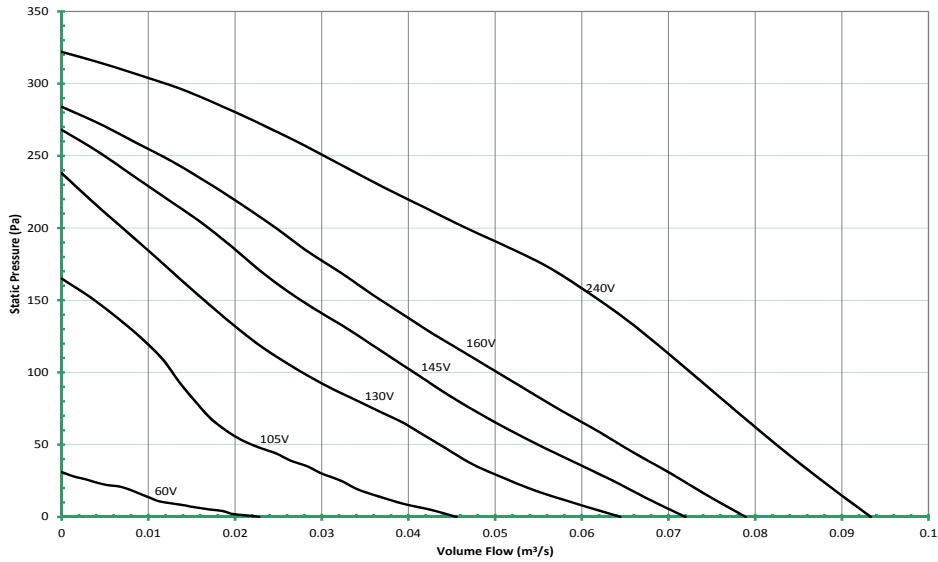
All dimensions shown in mm

Performance Data

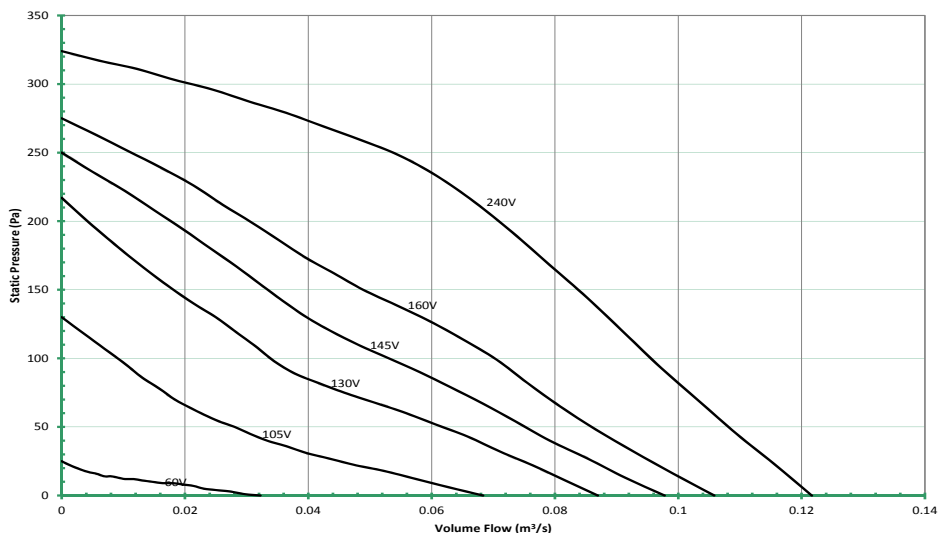
ESPADA - 100L



ESPADA - 125L

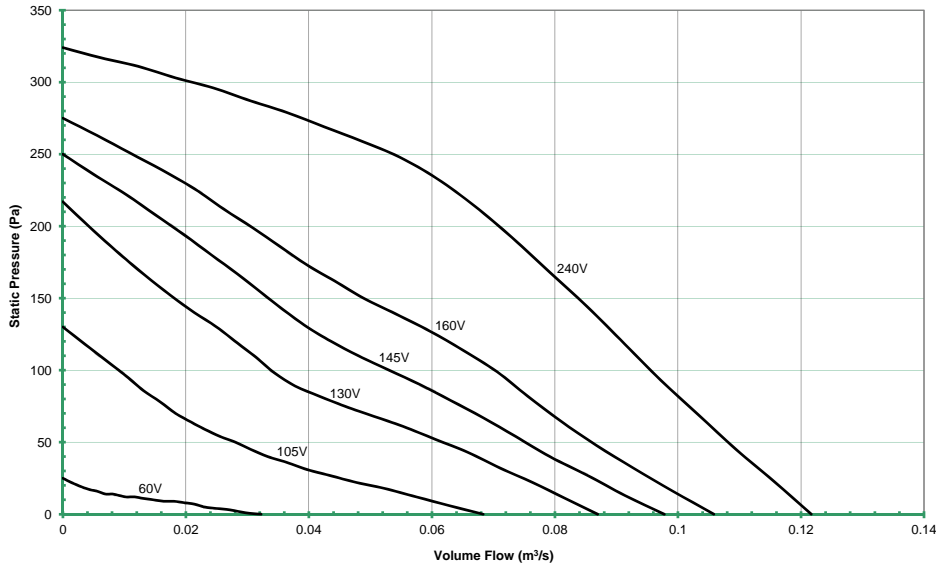


ESPADA - 150

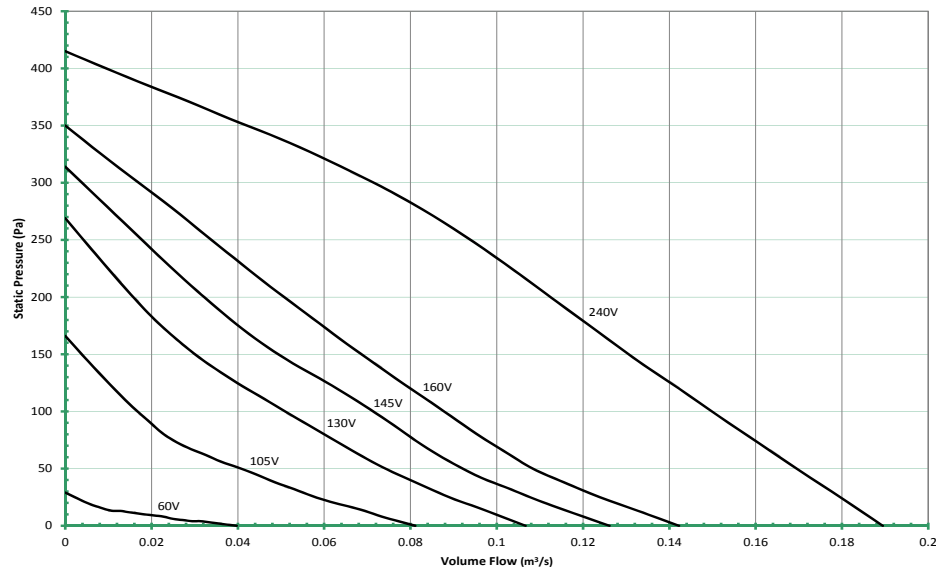


Performance Data

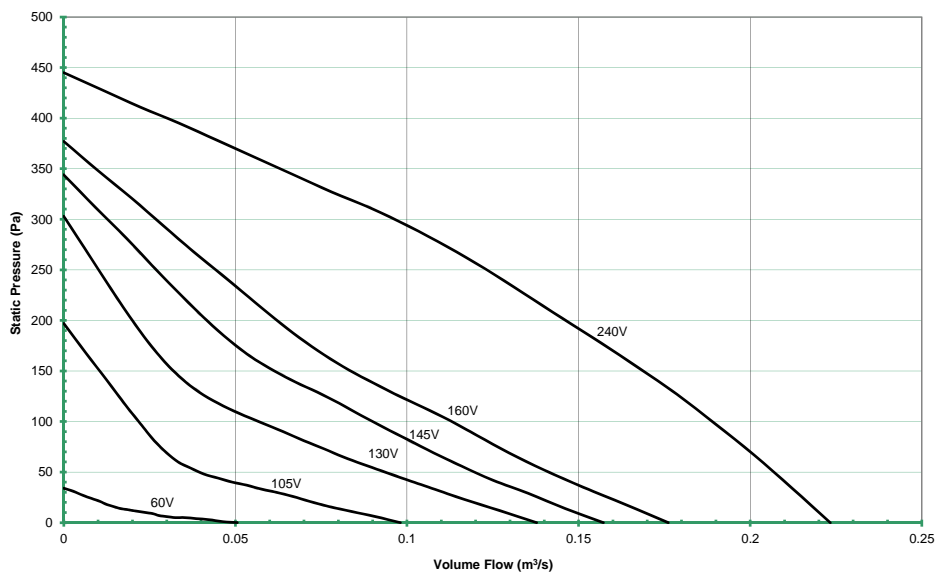
ESPADA - 160



ESPADA - 160L

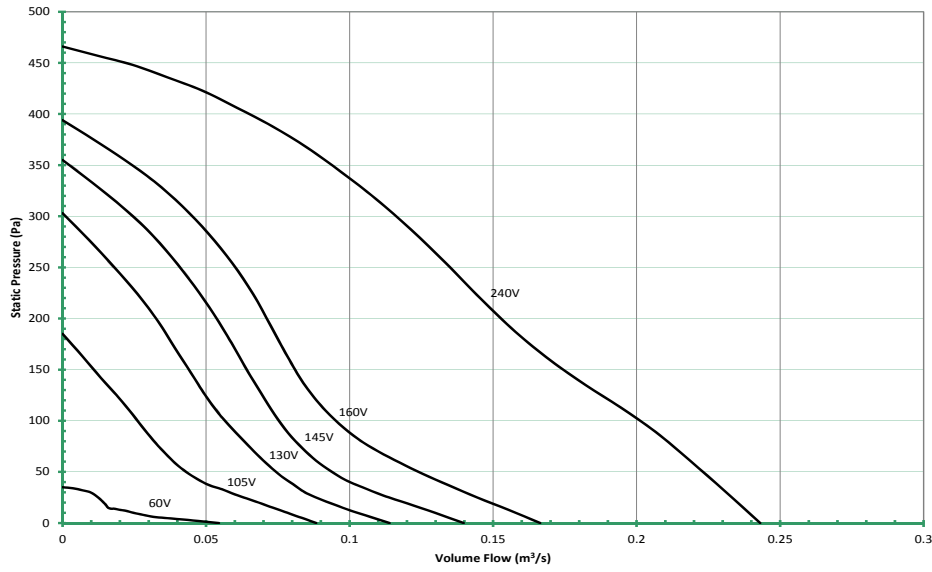


ESPADA - 200

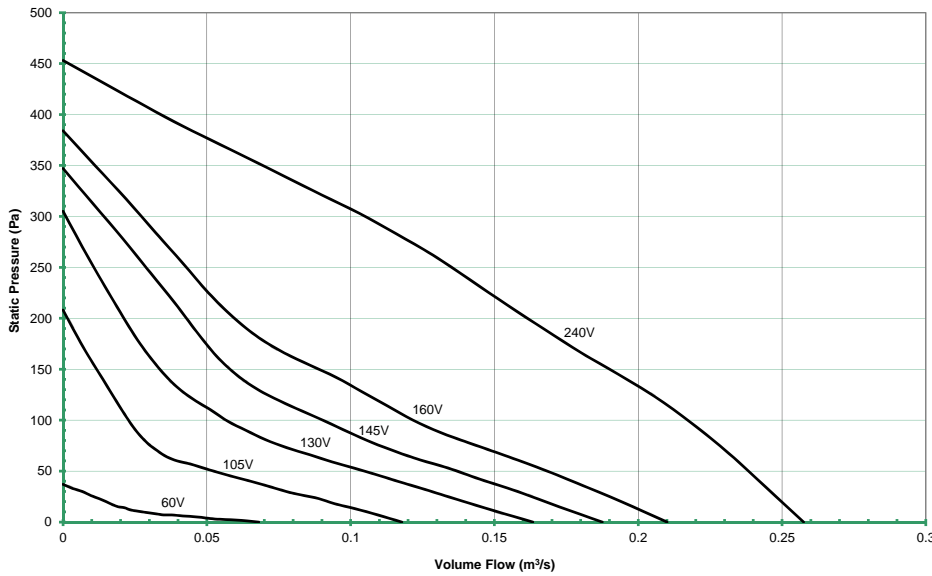


Performance Data

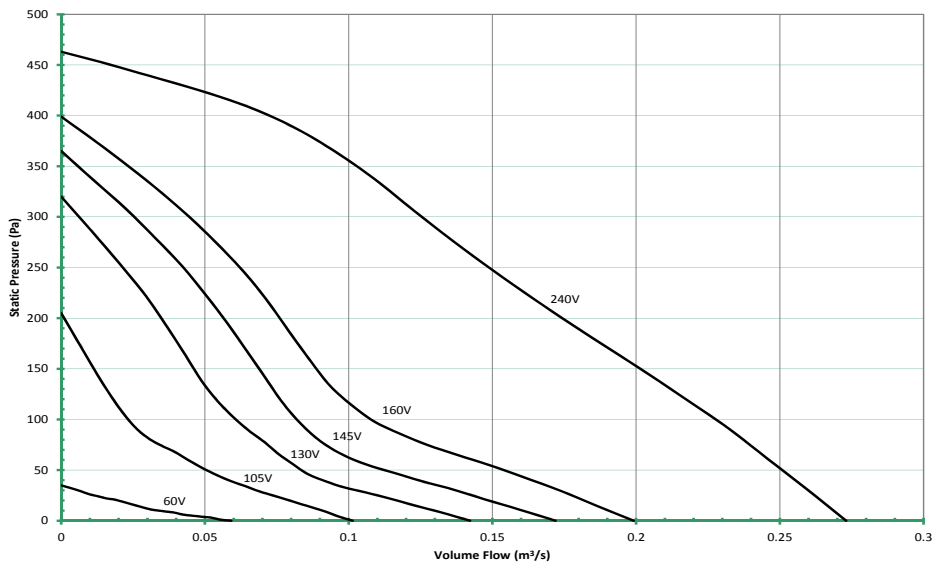
ESPADA - 200L



ESPADA - 250

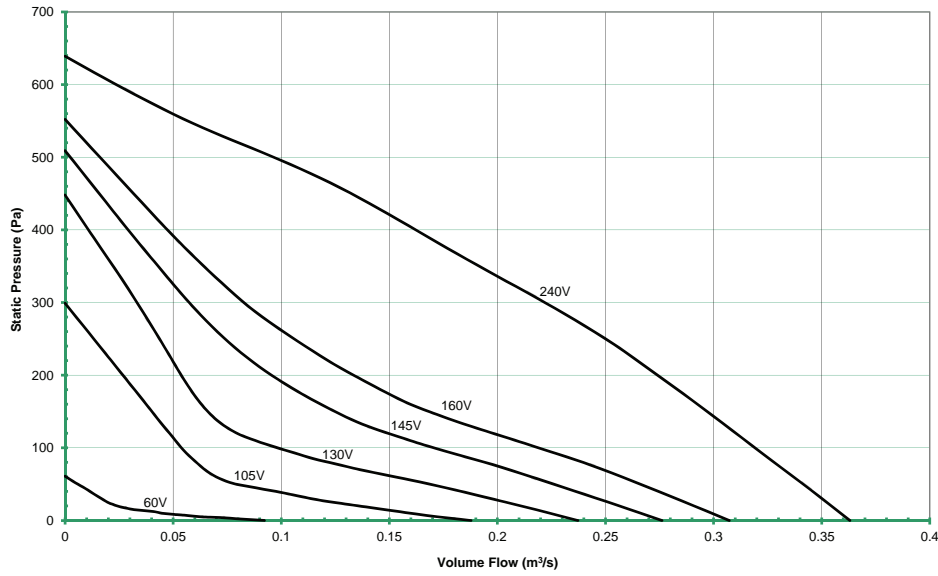


ESPADA - 250L

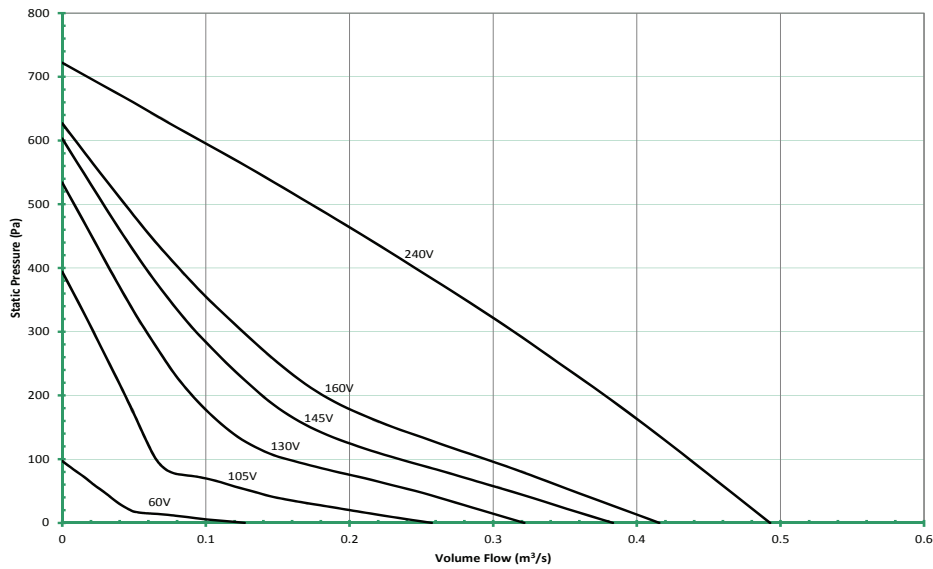


Performance Data

ESPADA - 315



ESPADA - 315L



Tube Fans - ROPERA Range



Features

- 100 mm to 355 mm diameter
- Air flow 2340 m³/h (0.65 m³/s)
- Static pressures up to 920 Pa
- Casing - galvanized sheet steel
- Backward curved impeller
- Easy electrical connection via terminal box
- Insulation class F
- Motor protection by thermal contacts

Electrical Supply

220 - 240V / 50Hz / 1 Ph

Sizes

100, 125, 150, 160, 200, 250, 315 and 355.

Features and Construction

The casings of sizes 100 - 355 are manufactured of galvanized sheet steel. The fans are driven by an external rotor motor, protection class IP44/54, fitted in the centrifugal impeller.

Installation

Rigid folded spiral-seam ducts (Spiro), flexible aluminium or plastic ducts with standardised diameter can be same or plastic.

Wiring

Insulation class F with additional moisture protection impregnation and thermal contacts which are connected in series with the windings of the motor.

Speed Controllers

Speed is 100% infinitely variable using auto transformers or electronic control (please see page 99).

Product Code

ROPERA 100 (L)

- ROPERA =Product Name
- 100 = diameter size
- L = (optional, larger motor)

Accessories

The range of accessories include duct clamps, filters, guards, dampers, silencers, mounting brackets, shutters. A quick reference guide is shown below. For full details on these items please see pages 33-36.



CFC



BDS



FLS



CSA



MFR



CFB



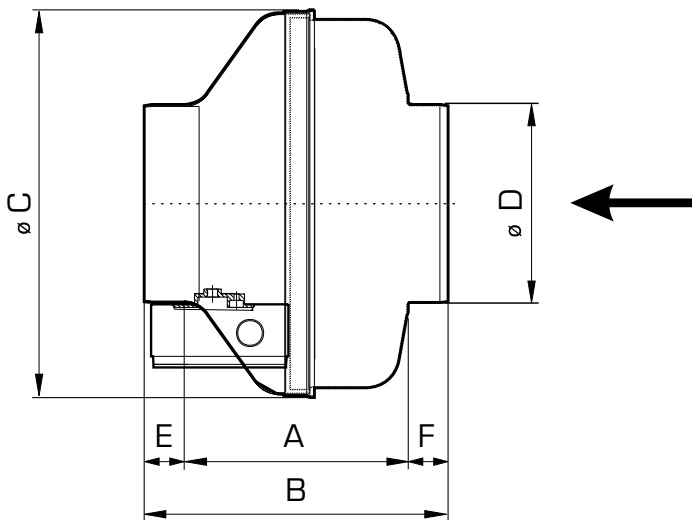
CIG

Electrical Details and Sound Levels

Product Code	Product Number	Speed rpm	Motor Frame	Electrical Supply	Electrical Current			Wiring Diagrams	Maximum Operating Temp °C	Breakout *Sound Level db(A) (3m)	**Speed Controllers	
					Motor (kW)	Full Load Current (A)	Starting Current (A)				Electronic	Transformer
ROPERA - 100	TF100010	2650	Integral	220-240V/50Hz/1Ph	0.028	0.19	0.3	CD3004	70	18	✓	✓
ROPERA - 100L	TF100012	2470	Integral	220-240V/50Hz/1Ph	0.065	0.3	0.45	CD3004	70	27	✓	✓
ROPERA - 125	TF125010	2620	Integral	220-240V/50Hz/1Ph	0.028	0.2	0.34	CD3004	70	20	✓	✓
ROPERA - 125L	TF125012	2480	Integral	220-240V/50Hz/1Ph	0.065	0.3	0.45	CD3004	70	28	✓	✓
ROPERA - 150	TF150010	2420	Integral	220-240V/50Hz/1Ph	0.07	0.45	0.68	CD3004	70	29	✓	✓
ROPERA - 150L	TF150012	2520	Integral	220-240V/50Hz/1Ph	0.11	0.47	0.71	CD3004	60	33	✓	✓
ROPERA - 160	TF160010	2380	Integral	220-240V/50Hz/1Ph	0.07	0.45	0.68	CD3004	70	29	✓	✓
ROPERA - 160L	TF160012	2500	Integral	220-240V/50Hz/1Ph	0.11	0.47	0.71	CD3004	60	32	✓	✓
ROPERA - 200	TF200010	2430	Integral	220-240V/50Hz/1Ph	0.12	0.75	1.13	CD3004	70	31	✓	✓
ROPERA - 200L	TF200012	2410	Integral	220-240V/50Hz/1Ph	0.17	0.73	1.17	CD3004	65	33	✓	✓
ROPERA - 250	TF250010	2400	Integral	220-240V/50Hz/1Ph	0.12	0.75	1.13	CD3004	70	33	✓	✓
ROPERA - 250L	TF250012	2470	Integral	220-240V/50Hz/1Ph	0.165	0.7	1.12	CD3004	60	34	✓	✓
ROPERA - 315	TF315010	2540	Integral	220-240V/50Hz/1Ph	0.23	1.8	3.24	CD3004	60	34	✓	✓
ROPERA - 315L	TF315012	2440	Integral	220-240V/50Hz/1Ph	0.3	1.3	2.21	CD3004	45	35	✓	✓
ROPERA - 355	TF355010	1290	Integral	220-240V/50Hz/1Ph	0.26	2.18	4.14	CD3005	45	34	✓	✓
ROPERA - 355L	TF355012	2340	Integral	220-240V/50Hz/1Ph	0.61	2.6	4.68	CD3005	50	44	✓	✓

*Sound power levels are average dBA at 3 metres distance over sphere, under free field conditions and are presented for comparative purposes only. Values taken at the mid point on the wave at the highest point. **For speed controllers, please see page 99.

Drawings and Dimensions



Product Code	A	B	C	D	E	F	Weight Kg
ROPERA - 100	142	192	242	100	25	25	2
ROPERA - 100L	136	186	242	100	25	25	2.6
ROPERA - 125	140	190	242	125	25	25	2.1
ROPERA - 125L	140	190	242	125	25	25	2.6
ROPERA - 150	140	190	341	150	25	25	3.4
ROPERA - 150L	140	190	341	150	25	25	3.7
ROPERA - 160	140	190	341	160	25	25	3.4
ROPERA - 160L	195	245	341	160	25	25	3.4
ROPERA - 200	180	230	341	200	25	25	3.7
ROPERA - 200L	180	230	341	200	25	25	4.2
ROPERA - 250	180	230	341	250	30	30	3.7
ROPERA - 250L	180	230	341	250	30	30	5.5
ROPERA - 315	195	255	402	315	30	30	6
ROPERA - 315L	195	255	402	315	30	30	6
ROPERA - 355	320	395	490	355	40	35	13.5
ROPERA - 355L	320	395	490	355	40	35	14

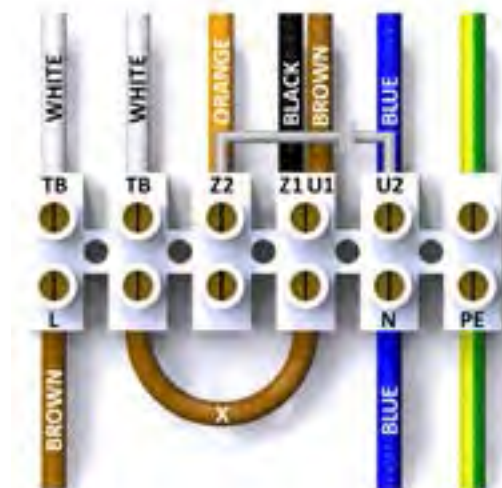
All dimensions shown in mm

Wiring Diagrams

CD3004



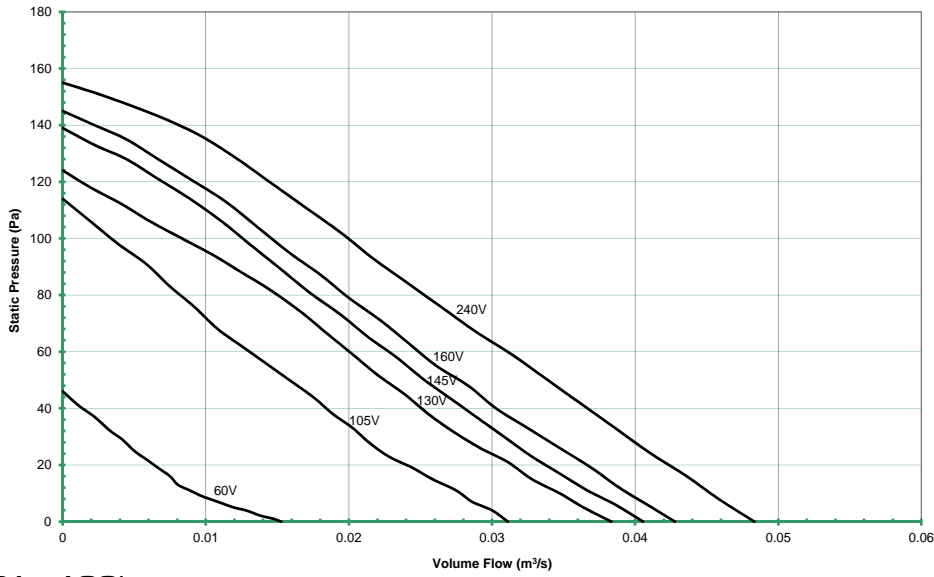
CD3005



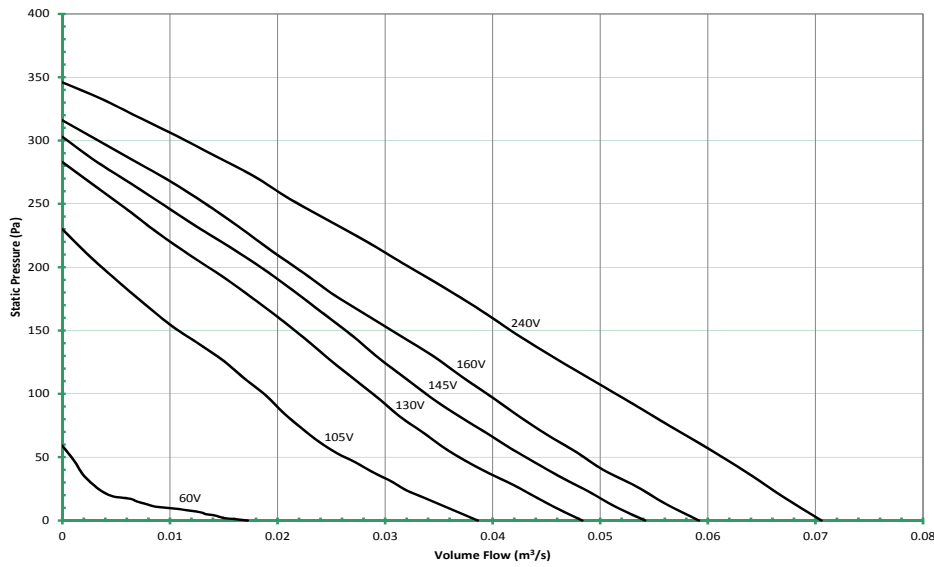
Clockwise

Performance Data

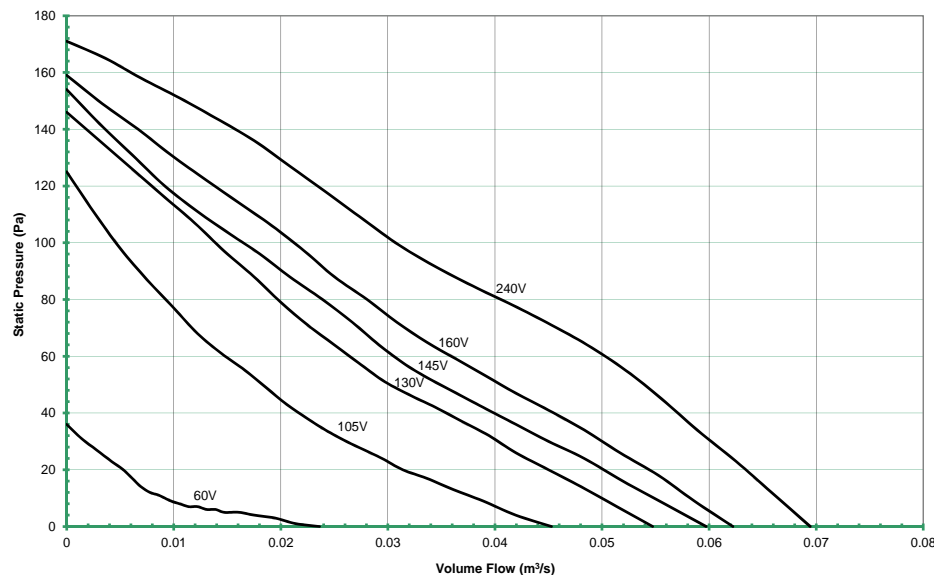
ROPERA - 100



ROPERA - 100L

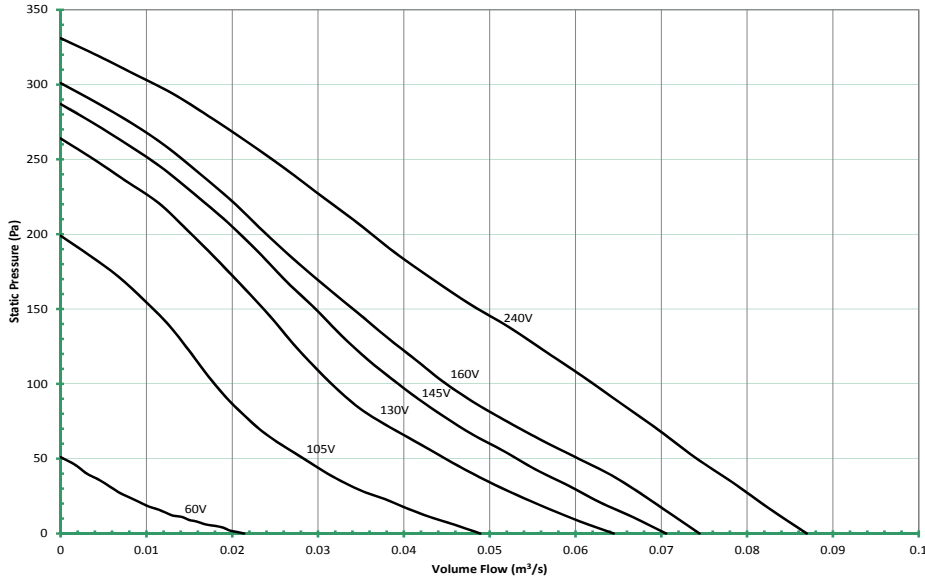


ROPERA - 125

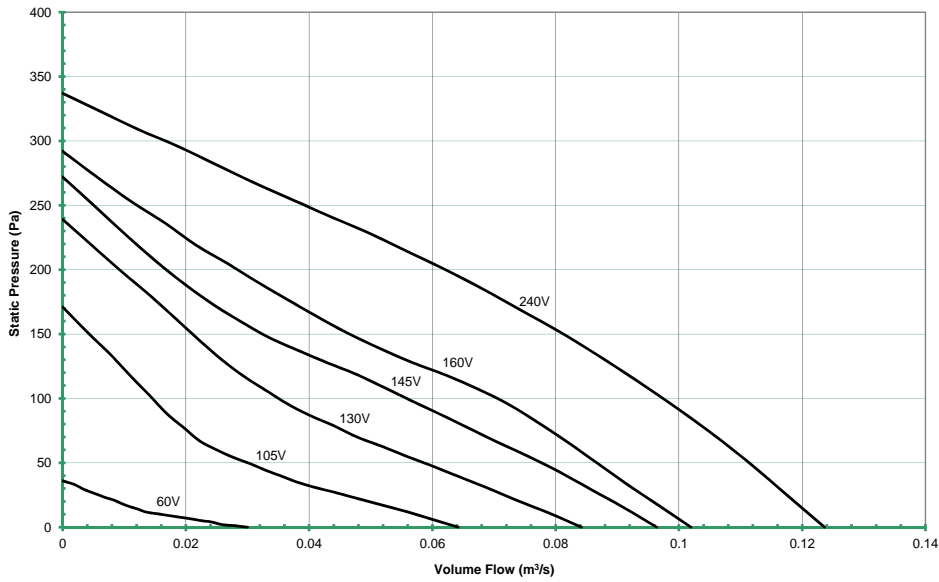


Performance Data

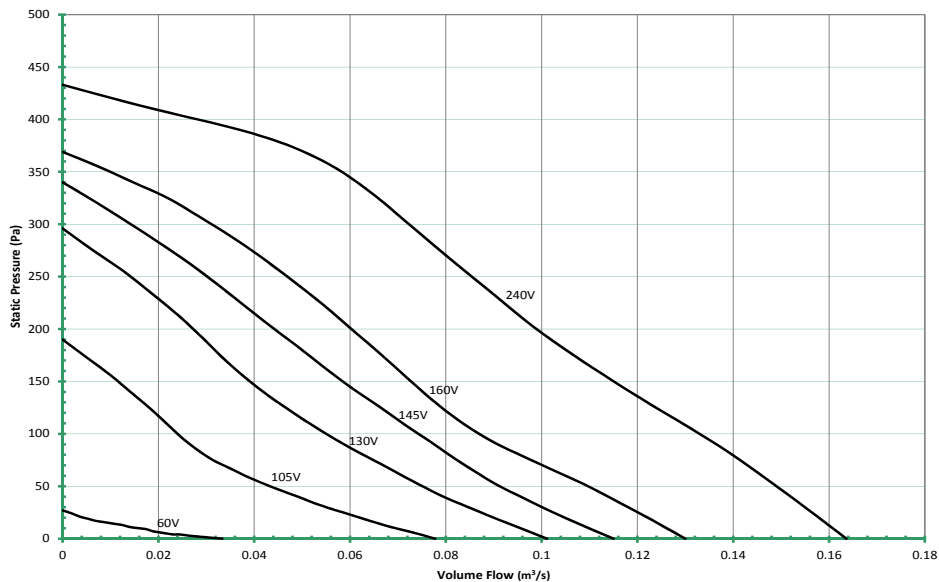
ROPERA - 125L



ROPERA - 150

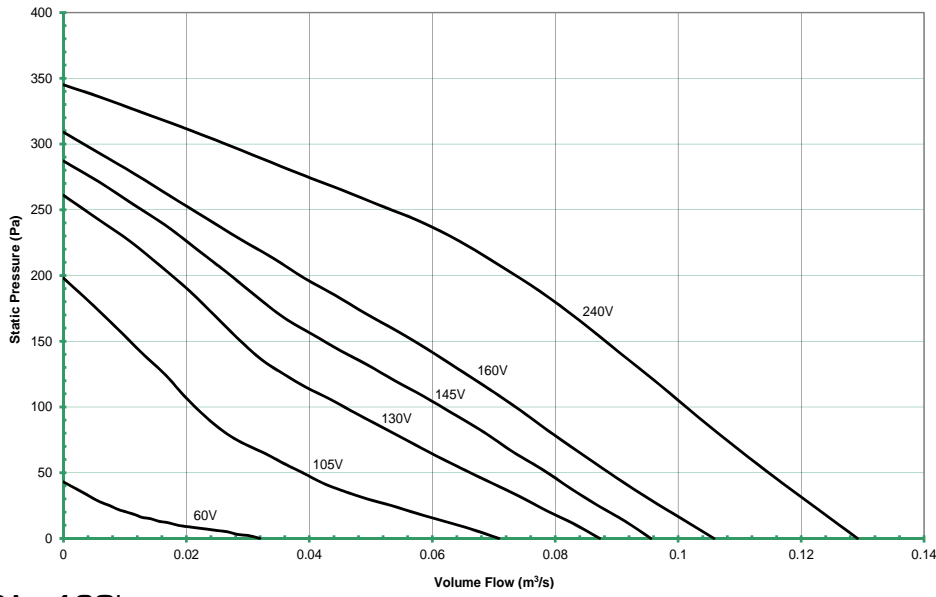


ROPERA - 150L

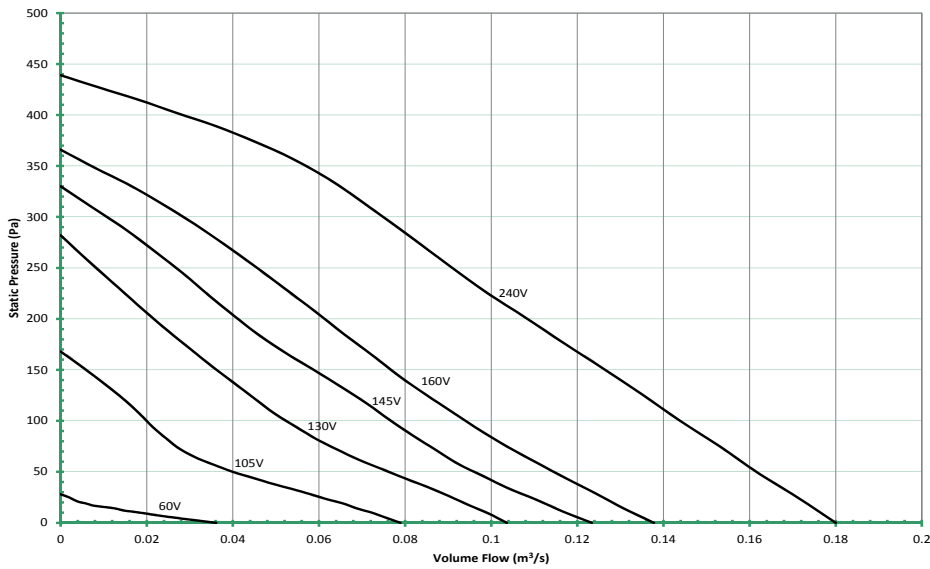


Performance Data

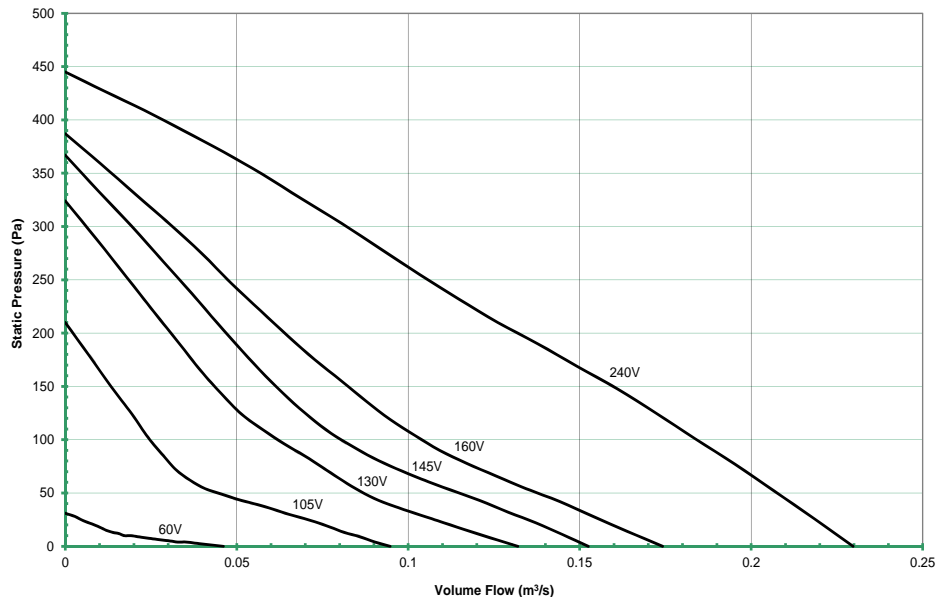
ROPERA - 160



ROPERA - 160L

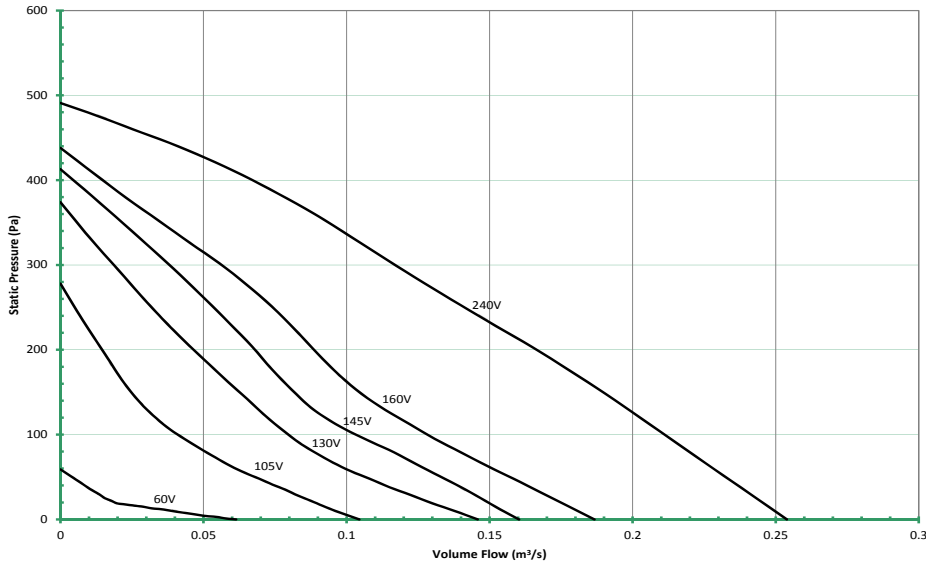


ROPERA - 200

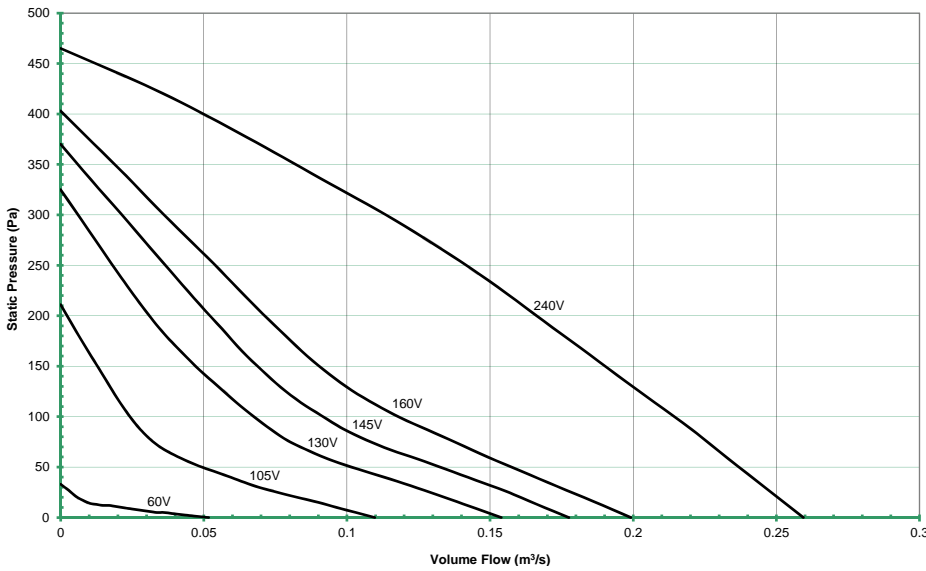


Performance Data

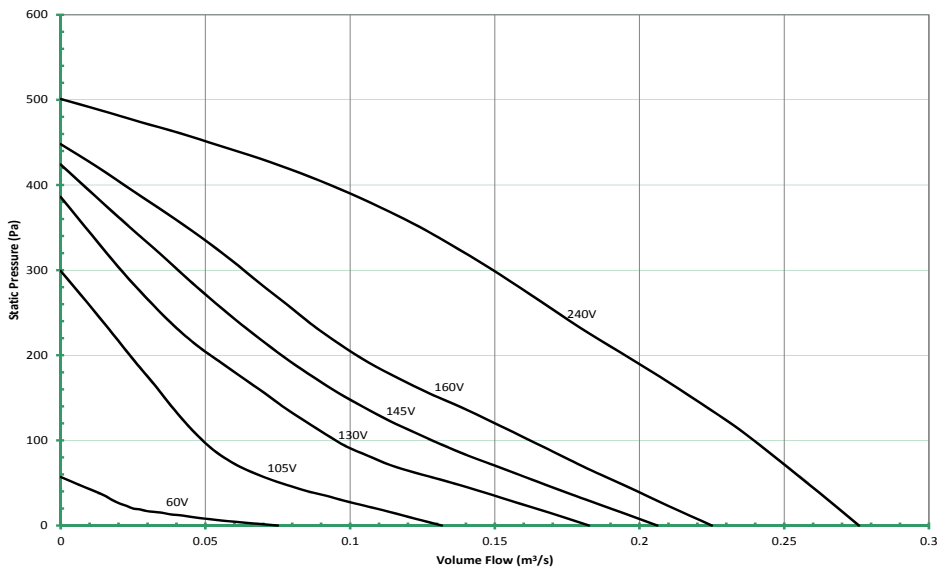
ROPERA - 200L



ROPERA - 250

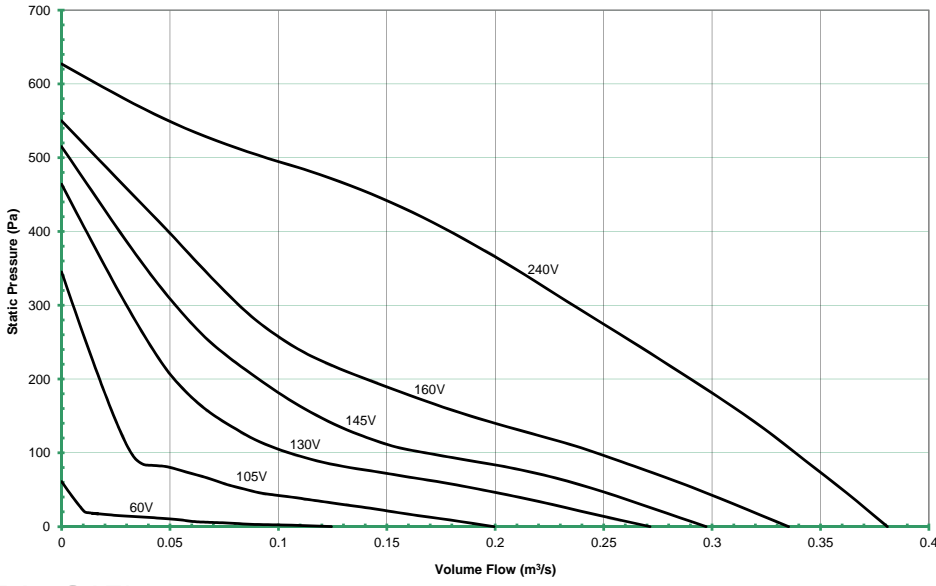


ROPERA - 250 L

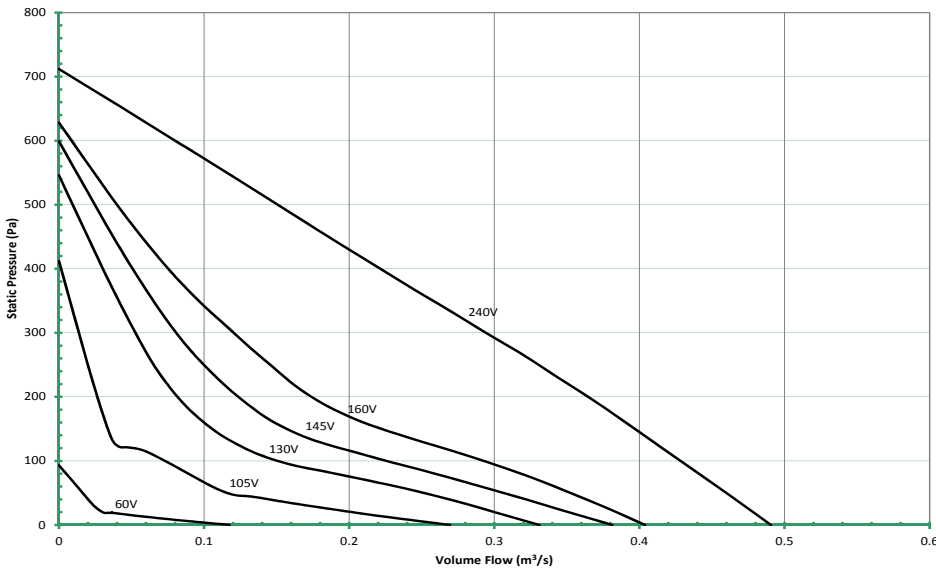


Performance Data

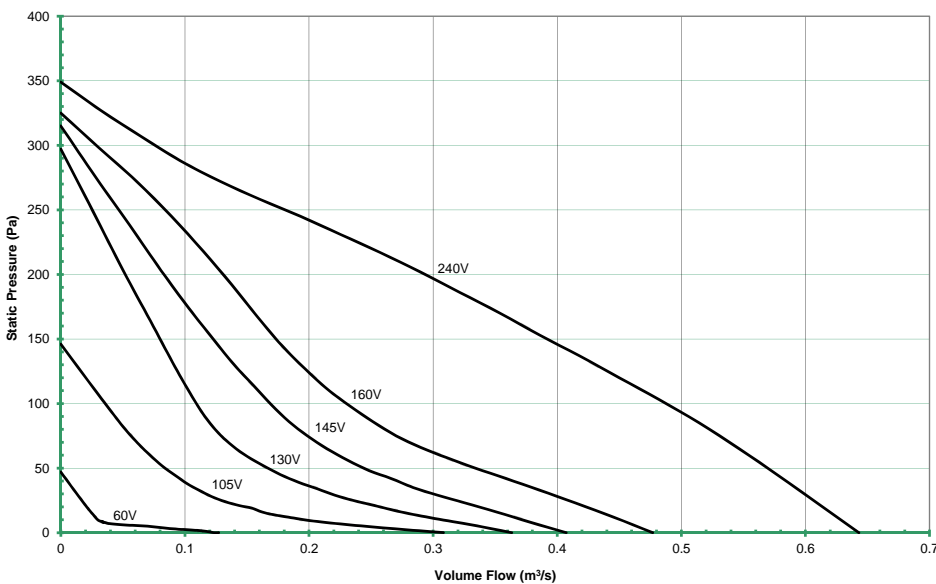
ROPERA - 315



ROPERA - 315L

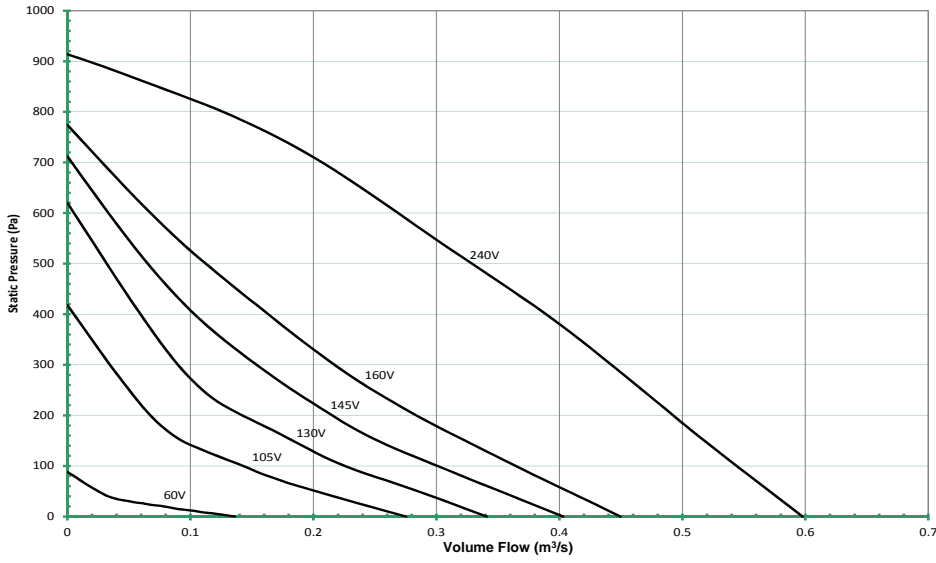


ROPERA - 355



Performance Data

ROPERA - 355L



Tube Fans - ROPERA EC Range



Features

- 160 mm to 355 mm diameter
- Air flow 2340m³/h (0.56 m³/s)
- Static pressures up to 640 Pa
- Casing - galvanized sheet steel
- Backward curved impeller
- Easy electrical connection via terminal box
- Motor protection by thermal contacts

Electrical Supply

220 - 240V / 50Hz / 1 Ph

Sizes

160, 200, 250, 315 and 355.

Features and Construction

EC (electronically controlled) motor. Casings of sizes 160 - 355 are manufactured of galvanized sheet steel. The fans are driven by an external rotor motor, protection class IP44, fitted in the centrifugal impeller.

Installation

Rigid folded spiral-seam ducts (Spiro), flexible aluminium or plastic ducts with standardised diameter can be same or plastic.

Wiring

Insulation class F with additional moisture protection impregnation and thermal contacts which are connected in series with the windings of the motor.

Speed Controllers

Integrated EC Controller (please see page 99).

Product Code

ROPERA EC 160

- ROPERA =Product Name
- EC - EC Motor
- 160 = diameter size

Accessories

The range of accessories include duct clamps, filters, guards, dampers, silencers, mounting brackets, shutters. A quick reference guide is shown below. For full details on these items please see pages 33-36.



CFC



BDS



FLS



CSA



MFR



CFB



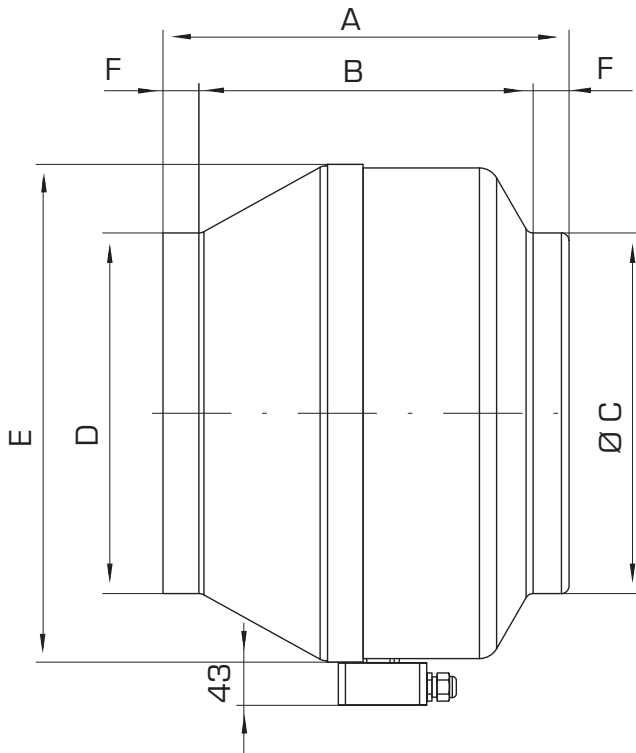
CIG

Electrical Details and Sound Levels

Product Code	Product Number	Speed rpm	Motor Frame	Electrical Supply	Electrical Current			Wiring Diagrams	Maximum Operating Temp °C	Breakout *Sound Level db(A) (3m)	**Speed Controllers Potentiometer
					Motor (kW)	Full Load Current (A)	Starting Current (A)				
ROPERA EC 160	TF160040	3730	Integral	220-240V/50Hz/1Ph	0.13	1	1	CD3014	50	33	✓
ROPERA EC 200	TF200040	3200	Integral	220-240V/50Hz/1Ph	0.16	1.1	1.1	CD3014	50	32	✓
ROPERA EC 250	TF250040	2760	Integral	220-240V/50Hz/1Ph	0.16	1.1	1.1	CD3014	50	34	✓
ROPERA EC 315	TF315040	2590	Integral	220-240V/50Hz/1Ph	0.2	0.8	0.8	CD3016	50	38	✓
ROPERA EC 355	TF355040	1740	Integral	220-240V/50Hz/1Ph	0.2	0.85	0.85	CD3016	50	32	✓

*Sound power levels are average dBA at 3 metres distance over sphere, under free field conditions and are presented for comparative purposes only. Values taken at the mid point on the wave at the highest point. **For speed controllers, please see page 99.

Drawings and Dimensions



Product Code	A	B	C	D	E	F	Weight Kg
ROPERA EC 160	202	152	160	160	341	25	3.7
ROPERA EC 200	225	205	200	200	341	25	4.5
ROPERA EC 250	256	196	250	250	341	30	3.9
ROPERA EC 315	255	195	315	315	402	30	6.6
ROPERA EC 355	400	330	355	355	490	35	13.2

All dimensions shown in mm

Wiring Diagrams

CD3014

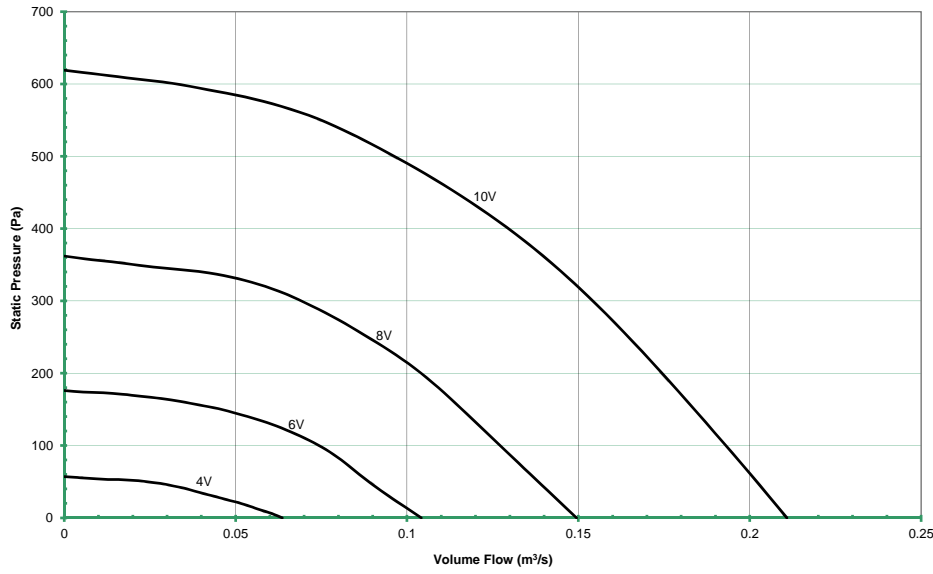


CD3016

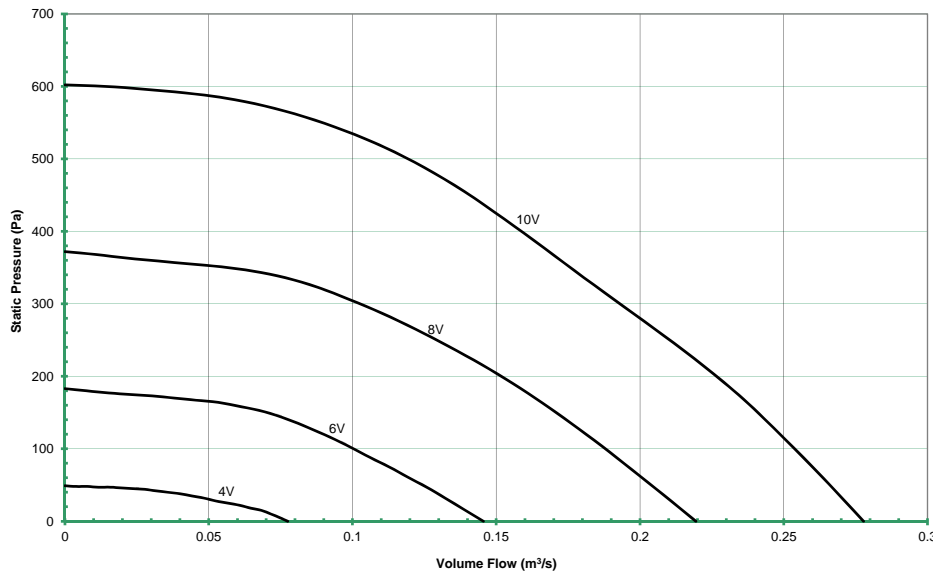


Performance Data

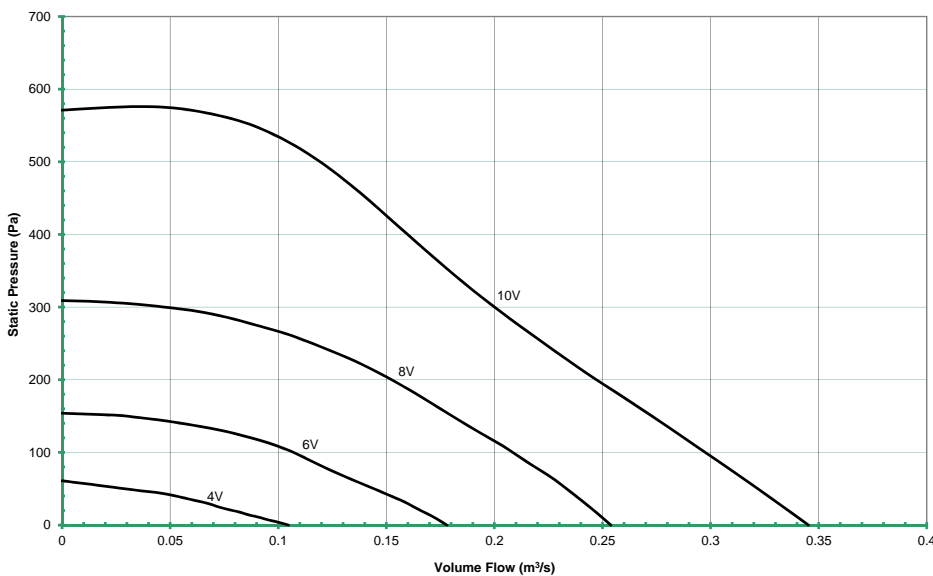
ROPERA EC 160



ROPERA EC 200

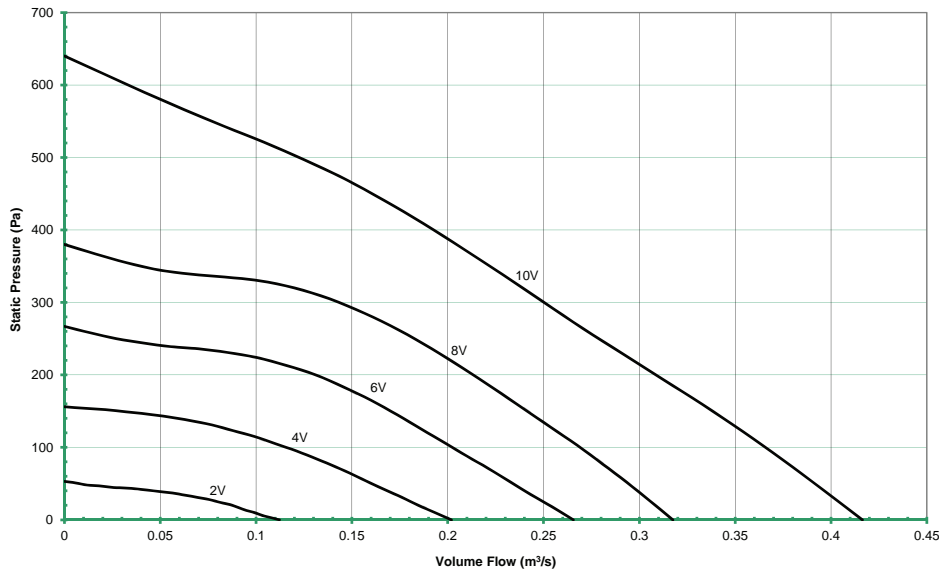


ROPERA EC 250

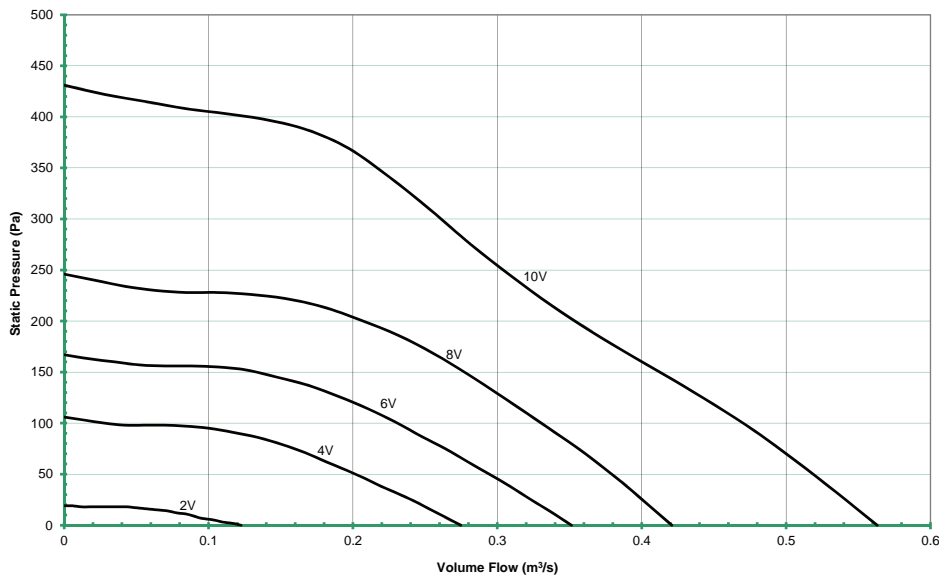


Performance Data

ROPERA EC - 315



ROPERA EC - 355

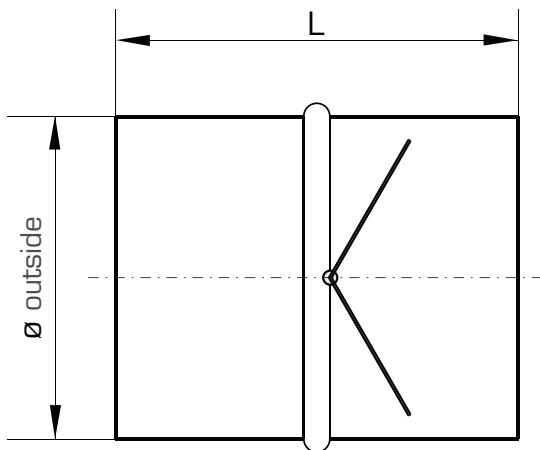


Accessories

BDS - Back Draught Damper



Automatic back draught damper with flute mechanism for installation into the tube system. Opening in air stream, closing via flute power. Casing made of galvanized sheet steel with aluminium back draught damper.



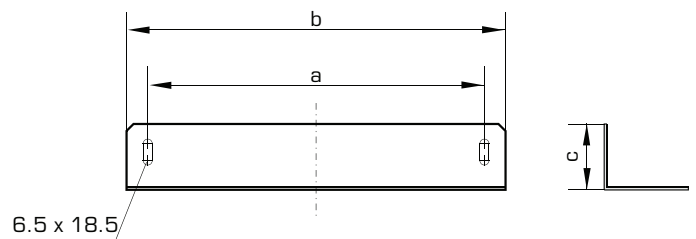
Product Size	Product Number	Ø Outside	L
100	BS100000	100	96
125	BS125000	125	96
150	BS150000	150	96
160	BS160000	160	96
200	BS200000	200	113
250	BS250000	250	113
315	BS315000	315	113
355	BS355000	355	113
400	BS400000	400	113

All dimensions shown in mm

MFE - Mounting Bracket



For mounting of a Espada tube fan. Made of galvanized steel. Drillings aligned to those of the fan. Delivery scope contains screws and screw nuts.

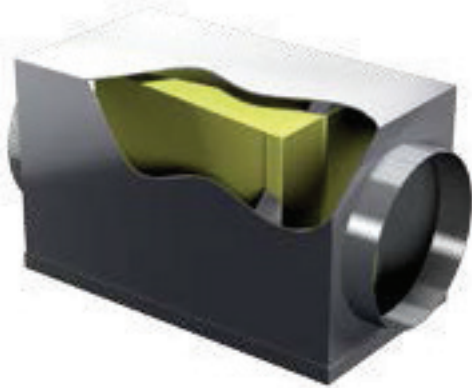


Product Code	Product Number	a	b	c
100L-125L	MB100125	240	270	47
150-250L	MB150250	240	270	47
315/315L	MB315000	375	405	47

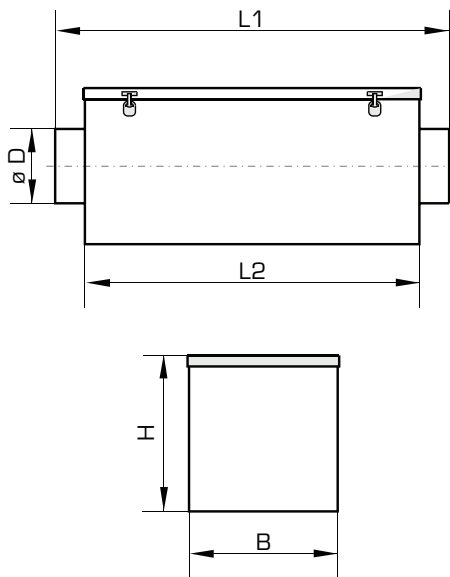
All dimensions shown in mm

Accessories

CFB - Filter Box incl. Filter



Casing made of galvanized sheet steel with folding cover for easy filter change. Filter of filter class F5 are inclusive. Connections suitable to standard tube diameters.



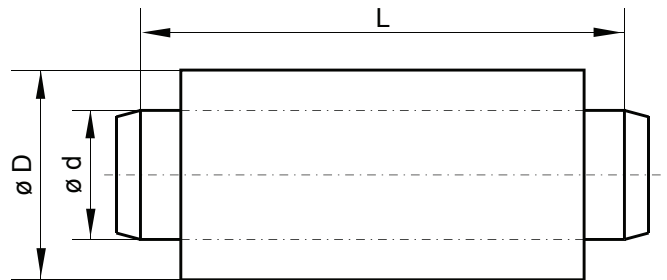
Size	Product Number	ØD	B	H	L1	L2
100	BI100354	100	200	210	530	450
125	BI100355	125	200	210	530	450
150	BI100356	150	245	275	530	450
160	BI100357	160	245	275	530	450
200	BI100358	200	245	275	530	450
250	BI100359	250	350	355	630	550
315	BI100360	315	350	355	630	550
355	BI100361	355	450	455	770	650
400	BI100362	400	450	455	770	650

All dimensions shown in mm

CSA - Sound Attenuator



Perforated aluminium tube with 50mm thick sound attenuator packet and helical wound external coat. Direct insertion into the aerating tube or connection via quick connectors. Suited for Ex-applications.



Size	Product Number	L	ØD	Ød
100	BI100412	1104	210	100
125	BI100413	1104	230	125
150	BI100414	1104	230	125
160	BI100415	1104	260	160
200	BI100416	1104	310	200
250	BI100417	1144	365	250
315	BI100418	1144	410	315
355	BI100419	1144	460	355
400	BI100420	1144	510	400

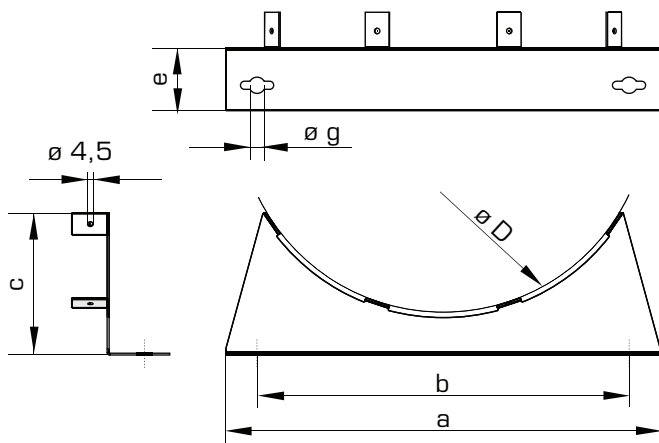
Size	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
100	10	17	25	36	40	36	30
125	9	15	22	33	36	33	26
150	7	13	21	30	32	31	23
160	7	13	21	30	32	31	23
200	7	11	19	27	29	28	21
250	7	10	18	24	26	23	18
315	7	9	17	21	24	18	16
355	7	8	17	20	22	16	15
400	6	8	16	19	21	15	14

Accessories

MFR - Foot



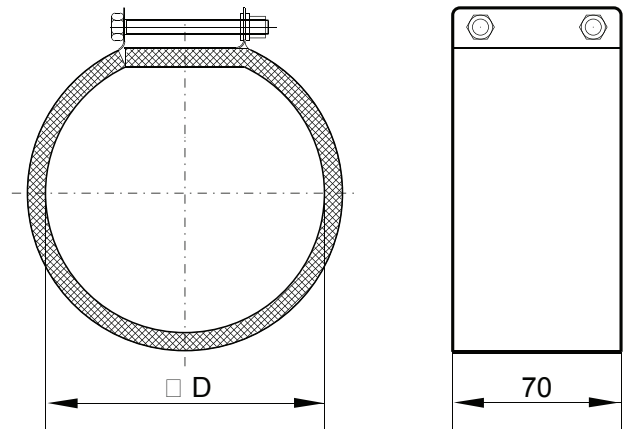
For mounting of a Ropera tube fan. Made of galvanized steel. Drillings aligned to those of the fan. Delivery scope contains screws and screw nuts.



CFC - Duct Clamps



Clamps made of galvanized sheet steel, for a low-noise connection between fan and plumbing. Inside lined with foam. Suitable for Ex-applications.



Size	Product Number	a	b	c	ØD	e	f	Øg
100-125L	MF100125	260	230	72.5	234	30	53.5	9
150-250L	MF150250	348	298	114	330	50	78.5	9
315/315L	MF315000	398	348	123	394	70	98.5	13
355/355L	MF355000	480	430	145	486	100	148.5	13

Size	Product Number	ØD
100	CP100000	100
125	CP125000	125
150	CP150000	150
160	CP160000	160
200	CP200000	200
250	CP250000	250
280	CP280000	280
315	CP315000	315
355	CP355000	355
400	CP400000	400

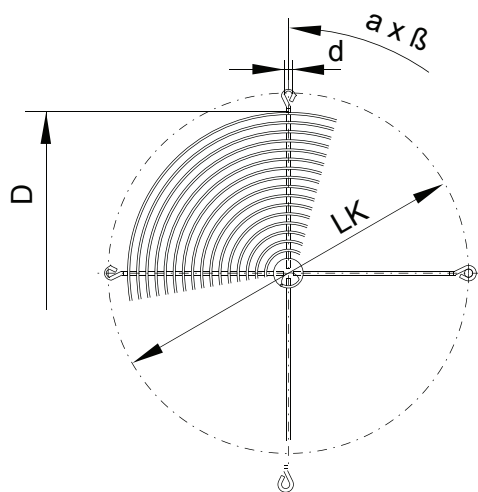
All dimensions shown in mm

Accessories

CIG - Protection Guard



Protection guard for suction side cover made of steel.

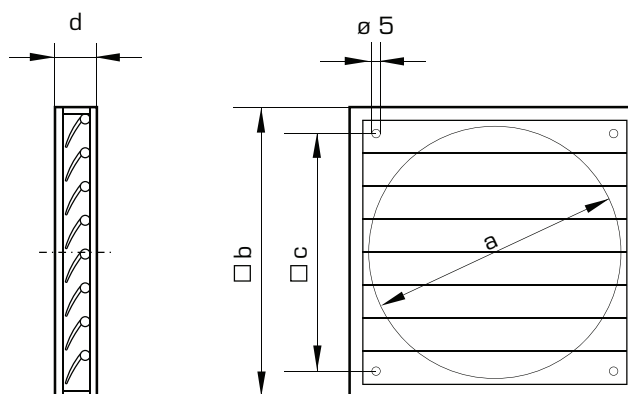


Size	Product Number	ØD
100	IG100000	100
125	IG125000	125
150	IG150000	150
160	IG160000	160
200	IG200000	200
250	IG250000	250
315	IG315000	315
355	IG355000	355
400	IG400000	400

FLS - Plastic Shutter



Automatic, square plastic shutter made of plastic for high-pressure wall installation. Ex version made of conductive plastic. (Ropera and Espada only).



Size	Product Number	Ø Outside	L
100	B1100411	100	96
125	B1100347	125	96
150	B1100348	150	96
160	B1100349	160	96
200	B1100350	200	113
250	B1100351	250	113
315	B1100352	315	113
355	B1100353	355	113

All dimensions shown in mm