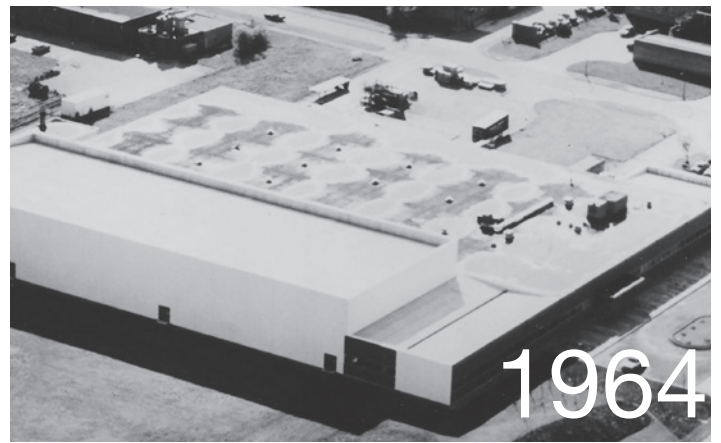
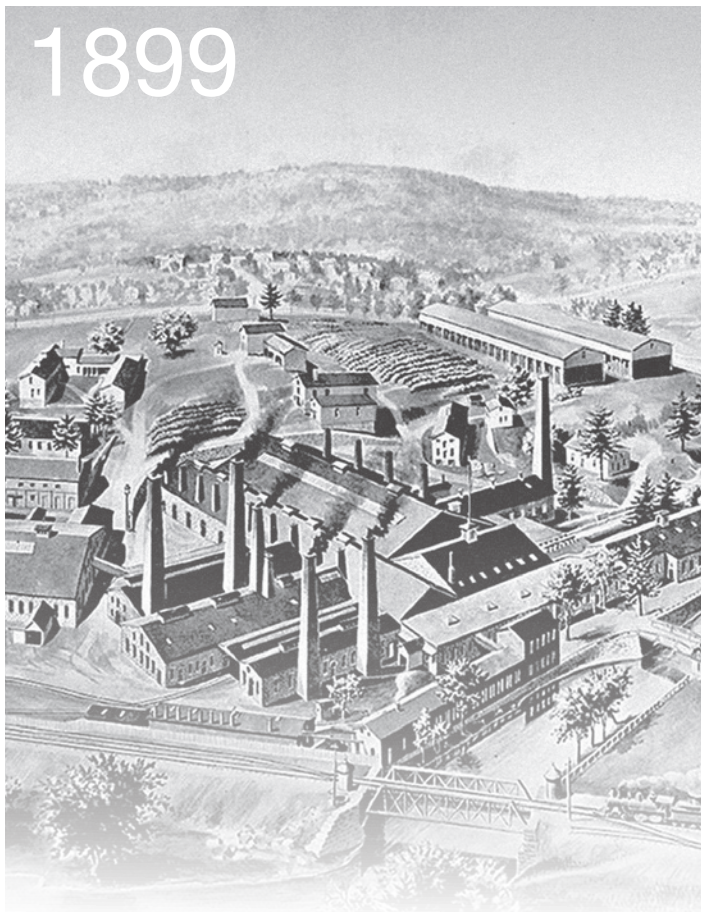


High Efficiency - 170w Range

Centrifugal Motorised Impellers and Fans





For over a century...

History

Originally formed over 100 years ago as part of the USA based Torin Corporation, and then established as a UK subsidiary in 1964; Torin have developed into an independent market leader in the supply of air-movement products, incorporating over 60 years of UK innovation.

Core Focus



Torin is a technology expert in the design, development and manufacture of centrifugal impellers, traditional AC motors and highly efficient Electronically Commutated (EC) motors.

Torin products exceed the requirements of European energy saving legislation; helping our customers to position themselves at the forefront of their markets.



Efficiency with every rotation

About us

Torin design and manufacture highly efficient AC and EC motors, motorised impellers and fans for the residential and commercial HVAC manufacturing markets worldwide.

With over 60 years experience developing and manufacturing products, we sell over 1 million units per year and manufacture from two production sites in the UK.

More than 60 years of Innovation

Since our humble beginnings on the banks of the Naugatuck river in Connecticut USA, we have come a long way changing names, continents, owners and innovating the most efficient electric motor technology. We continue to invest in our local community, British engineering and raising the profile of Torin throughout the world.

International markets

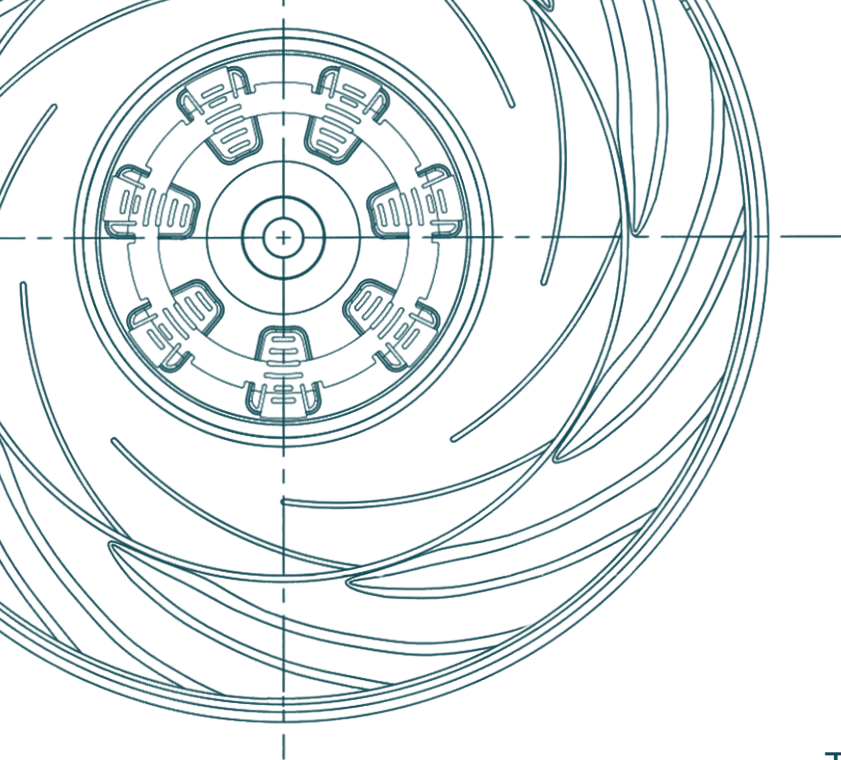
We are a truly international business with our sales evenly split between our home market in the UK and numerous export customers, all serviced by our technically competent international sales team. Support is provided by experienced product development and applications engineers backed up by an excellent research and development facility.

Customised Solutions

We understand the ever-changing market, therefore we offer customised product solutions to meet your exact needs. Whether you require a change to one of our standard products or by managing a truly joint development partnership to produce a product customised to meet your requirements.

Current examples include:

- Specific housing designs, including material thickness, mounting-hole locations and flange design.
- Lead lengths cut to size and your specified plug fitted.
- External or on-board electronics options
- Performance optimisation, including impeller and electronics design
- Licensing agreements for electronic circuitry
- Production and balancing of fans within your own product assemblies.



EC Centrifugal Fan

Torin started manufacturing EC Centrifugal motorised impellers and fans in the late 1990's and since then, have successfully sold over one million EC products to the European ventilation industry.

We have opened our own EC Manufacturing and Technology Centre which acts as the centre of excellence for everything EC. Our state of the art facility has benefited from an investment exceeding £2m and houses the production of highly efficient EC motor, fan and blower products.

Our EC motorised impellers are part of our Revolution 360 range. Utilising the latest three phase technology, ensuring best in class efficiency levels as well as whisper quiet operation. These are fundamental considerations when selecting your partner for air movement projects. This 170W range is optimised to provide aerodynamic efficiency and low acoustic noise at the higher static pressures encountered in today's ventilation applications.

EC motors are significantly more efficient when compared to their AC counterparts. This is inherently down to how the motor generates torque. EC motors use permanent magnets to create an interactive magnetic field, a process that doesn't consume much energy unlike AC technology which suffers losses through copper windings and aluminium bars.

Typical Specifications & Features

Technical Data	
Supply Voltage (rms)	198 to 264 V
Supply Phase	Single
Supply Frequency Range	50/60 Hz
Control Input	0-10 V / PWM
Control Output	10 V (3 mA), Tachometer
Dielectric Strength	1.5 kV dc
Leakage Current	≤3.5 mA
Protection	Locked rotor
Inrush Current at Power-on	7.5A max, ½ cycle at 24 °C. 9.0A max, ½ cycle at 60 °C.
Motor Protection	IP54
Motor Insulation Class	B
Operational Ambient Temperature Range	-20 °C to + 60 °C
Material	<ul style="list-style-type: none"> •Motor Housing - Die Cast Aluminium. •Rotor Cup - Passivated Mild Steel. •Electronics Pod - Plastic ABS / PC •Impeller - plastic PA6, Glass-fibre reinforced or galvanised steel.
Motor Mounting (Type Dependent)	4 holes M6 x 1.0 - 6H x 10mm deep, equi-spaced on a 90.0 PCD, Max screw length 5mm. Additional mounting (forward curved impellers only) 4 holes M4 x 0.7 - 6h equi-spaced on a 125.0 PCD.
Bearings	Sealed and maintenance free
Balance grade	G4 or below
Approvals	CE
EMC	
Emission	EN61000-6-3
Immunity	EN61000-6-2
Harmonics	EN61000-3-2/3
LVD	
Electrical Safety	EN60335-1, EN60335-2-80



Motorised Impellers range summary

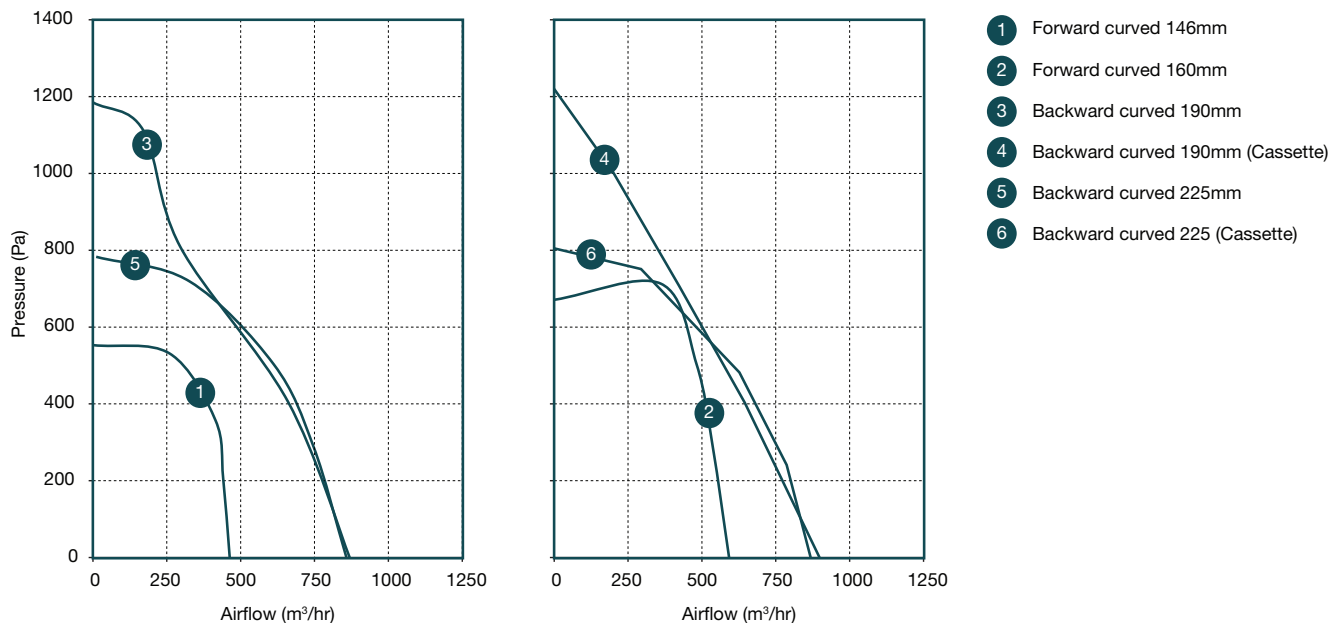


Forward Curved 146mm	Forward Curved 160mm	Backward Curved 190mm	Backward Curved 225mm	Single-Inlet 146mm	Single-Inlet 160mm	Cassette Frame 190mm	Cassette Frame 225mm
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Technical Data

Supply Voltage (rms)	198 - 264 V	198 - 264 V	198 - 264 V	198 - 264 V	198 - 264 V	198 - 264 V	198 - 264 V	198 - 264 V
Max Airflow	463 m ³ /h	592 m ³ /h	869 m ³ /h	847 m ³ /h	463 m ³ /h	592 m ³ /h	899W m ³ /h	868 m ³ /h
Max Current	1.63 A	1.62 A	1.62 A	1.57 A	1.63 A	1.62 A	1.57 A	1.56 A
Max Input Power	186 W	183 W	185 W	176 W	186 W	183 W	181 W	181 W
Max Speed	3000 rpm	3000 rpm	4900 rpm	3300 rpm	3000 rpm	3000 rpm	4900 rpm	3300 rpm
ErP Efficiency Rating (FMEG)	53	60	71	77	53	60	70	74
Ip Rating	54	54	54	54	54	54	54	54
Motor Insulation Class	B	B	B	B	B	B	B	B
Temperature Range	-20°C to +60 °C	-20°C to +60 °C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C
Weight	1.38 kg	1.49 kg	1.46 kg	1.72 kg	2.40 kg	2.60 kg	1.91 kg	2.47 kg
Standard Direction of Rotation	Clockwise	Clockwise	Clockwise	Clockwise	Clockwise	Clockwise	Clockwise	Clockwise
Number of Blades	48	38	7	9	48	38	7	9

Consolidated Graph - 170w range





High Efficiency Motorised Impellers

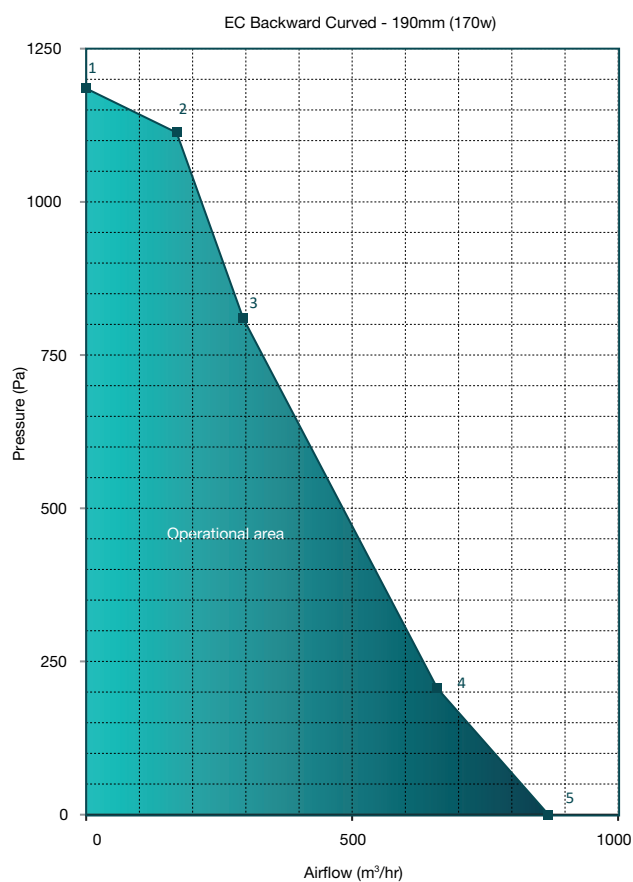
EC Backward Curved - 190mm (170w)

Technical Data

Supply Voltage (rms)	198 to 264 V
Max Airflow	869 m ³ /h
Max Current	1.62 A
Max Input Power	185 W
Max Speed	4900 rpm
ErP Efficiency Rating (FMEG)	71
IP Rating	54
Motor Insulation Class	B
Temperature Range	-20°C to + 60°C
Weight	1.46 kg
Direction of Rotation	Clockwise
Number of Blades	7

Performance Data

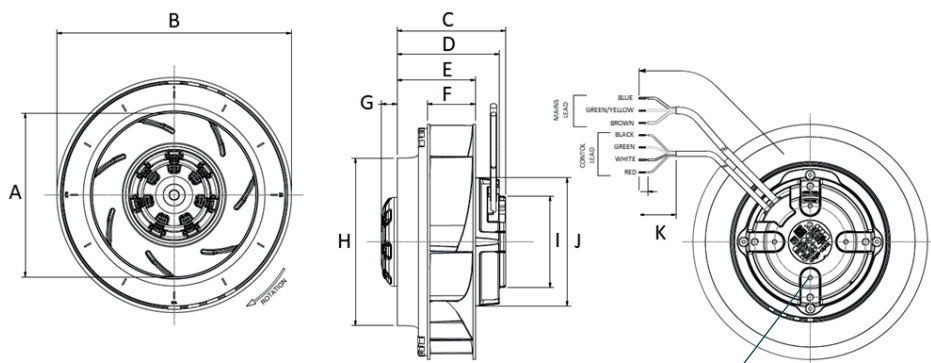
Data Point	Static Pressure (Pa)	Airflow (m ³ /h)	Current (A)	Speed (rpm)	Power (W)
1	1185	0	1.20	4896	135
2	1113	170	1.56	4896	179
3	810	295	1.61	4432	184
4	406	660	1.61	4369	184
5	0	869	1.61	4632	184



Tested in accordance with ISO 5801. Installation method - type A.

Dimensions (mm)

A	132.5	G	12.7
B	190.0	H	135.5
C	88.0	I	74.0
D	83.0	J	104.0
E	63.5	K	30.0
F	39.0		



4 HOLES M4 x 0.7-6H x 7.0 DEEP
EQUI-SPACED ON A 58.00 PCD.
MAX SCREW LENGTH 5mm



Efficiency with every rotation



High Efficiency Motorised Impellers

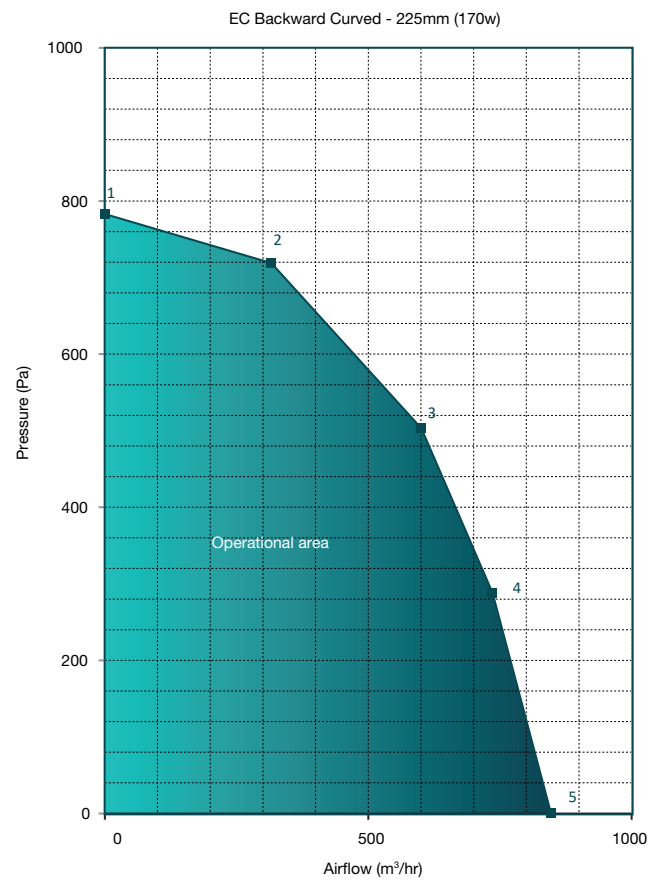
EC Backward Curved - 225mm (170w)

Technical Data

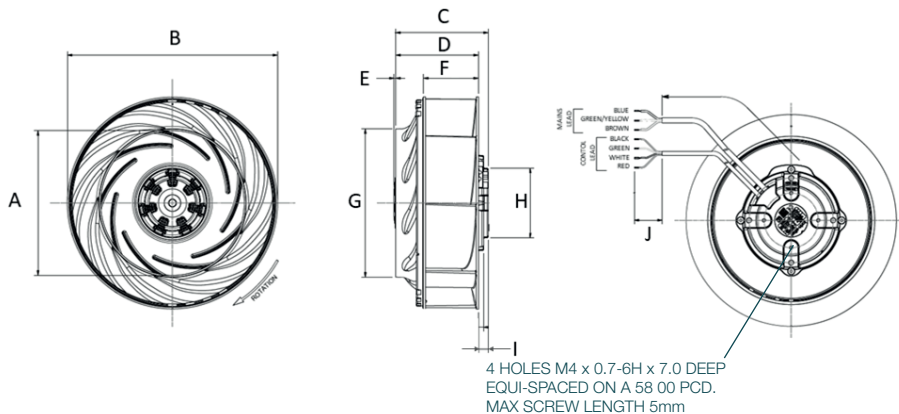
Supply Voltage (rms)	198 to 264 V
Max Airflow	847 m ³ /h
Max Current	1.57 A
Max Input Power	176 W
Max Speed	3300 rpm
ErP Efficiency Rating (FMEG)	77
IP Rating	54
Motor Insulation Class	B
Temperature Range	-20°C to + 60°C
Weight	1.72 kg
Direction of Rotation	Clockwise
Number of Blades	9

Performance Data

Data Point	Static Pressure (Pa)	Airflow (m ³ /h)	Current (A)	Speed (rpm)	Power (W)
1	783	0	0.84	3299	90
2	719	316	1.43	3301	159
3	503	601	1.54	3299	173
4	288	736	1.35	3301	149
5	0	847	0.97	3299	103

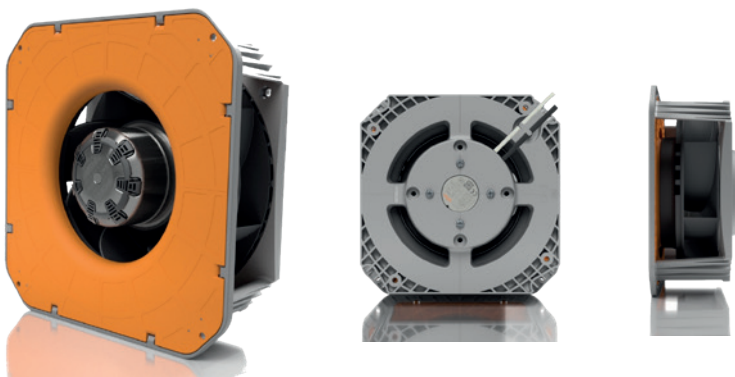


Tested in accordance with ISO 5801. Installation method - type A.



Dimensions (mm)

A	153.5	G	157.3
B	225.0	H	74.0
C	99.0	I	10.6
D	88.4	J	30.0
E	1.7		
F	58.7		



High Efficiency Motorised Impellers

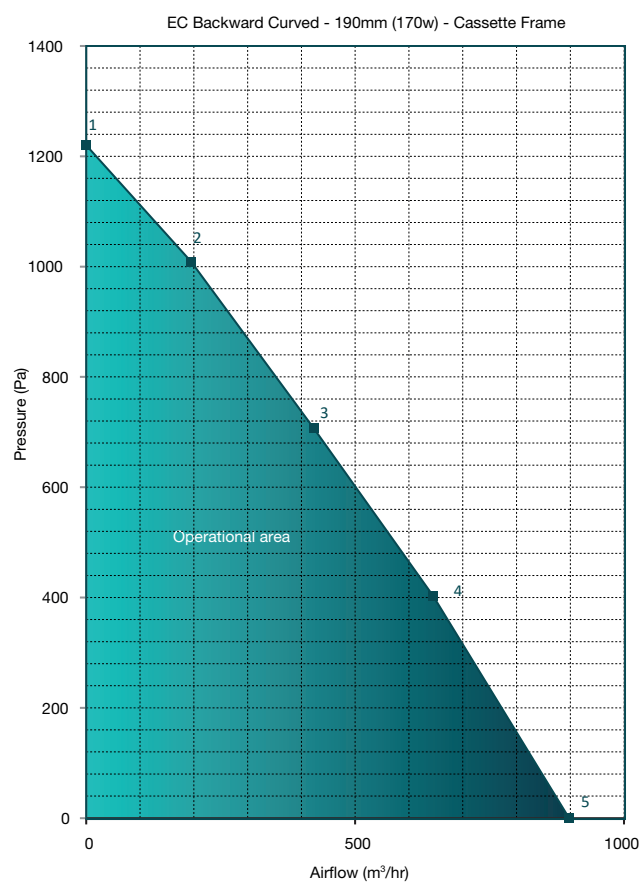
EC Backward Curved - 190mm (170w) - Cassette Frame

Technical Data

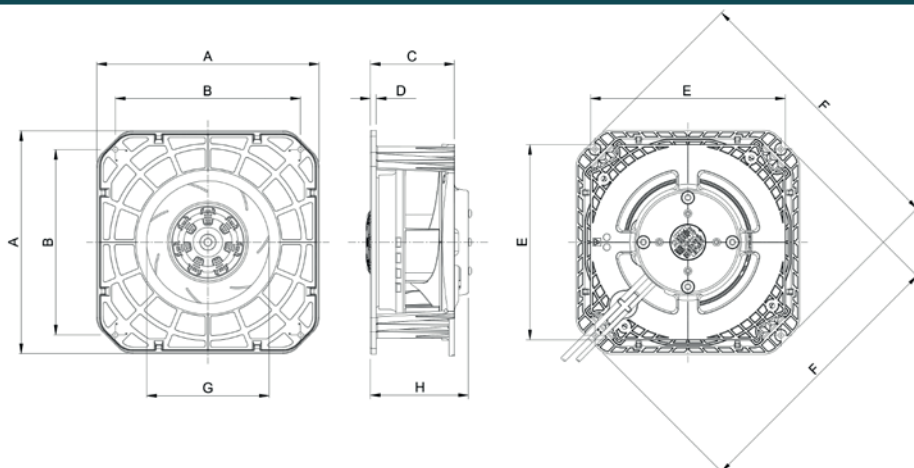
Supply Voltage (rms)	198 to 264 V
Max Airflow	899 m ³ /h
Max Current	1.57 A
Max Input Power	181 W
Max Speed	4900 rpm
ErP Efficiency Rating (FMEG)	70
IP Rating	54
Motor Insulation Class	B
Temperature Range	-20°C to + 60°C
Weight	1.91 kg
Direction of Rotation	Clockwise
Number of Blades	7

Performance Data

Data Point	Static Pressure (Pa)	Airflow (m ³ /h)	Current (A)	Speed (rpm)	Power (W)
1	1220	0	1.22	4901	142
2	1009	195	1.55	4674	181
3	707	423	1.56	4295	180
4	403	645	1.56	4249	181
5	0	899	1.57	4694	181

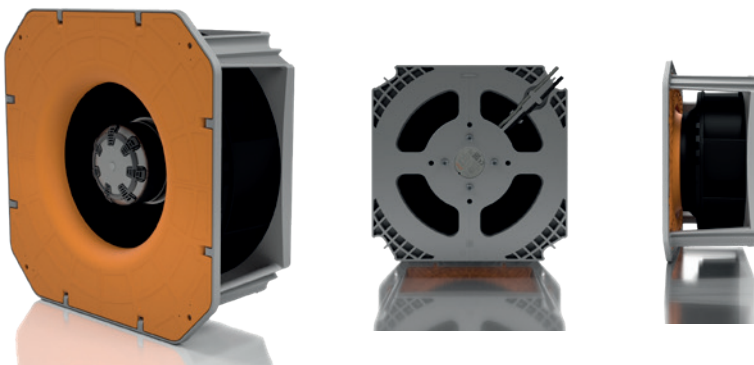


Tested in accordance with ISO 5801. Installation method - type A.



Dimensions (mm)

A	226.0	G	124.5
B	188.1	H	99.0
C	85.0		
D	6.0		
E	197.0		
F	279.6		



High Efficiency Motorised Impellers

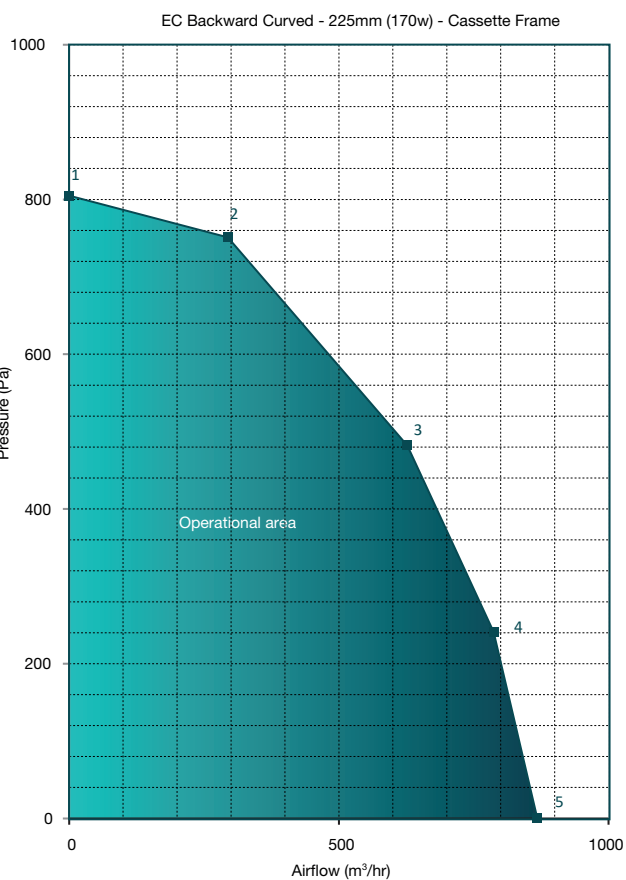
EC Backward Curved - 225mm (170w) - Cassette Frame

Technical Data

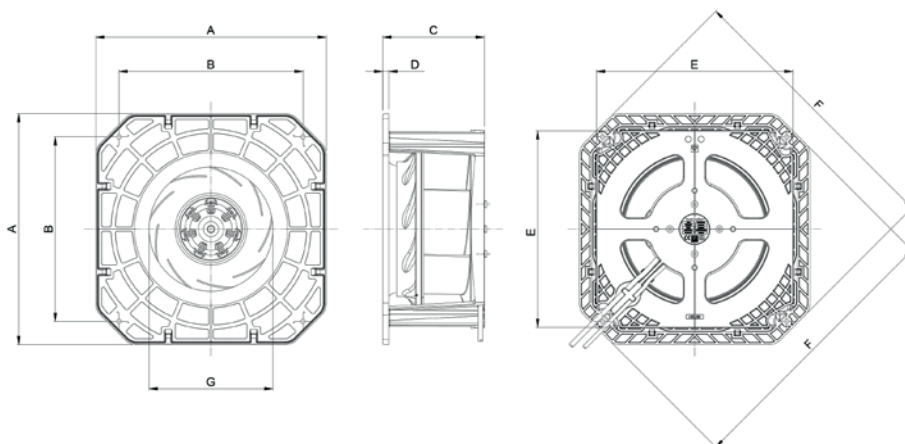
Supply Voltage (rms)	198 to 264 V
Max Airflow	868 m³/h
Max Current	1.56 A
Max Input Power	181 W
Max Speed	3300 rpm
ErP Efficiency Rating (FMEG)	74
IP Rating	54
Motor Insulation Class	B
Temperature Range	-20°C to + 60°C
Weight	2.47 kg
Direction of Rotation	Clockwise
Number of Blades	9

Performance Data

Data Point	Static Pressure (Pa)	Airflow (m³/h)	Current (A)	Speed (rpm)	Power (W)
1	805	0	0.87	3299	97
2	751	294	1.45	3297	167
3	482	627	1.56	3237	181
4	241	787	1.35	3299	154
5	0	868	1.00	3300	110



Tested in accordance with ISO 5801. Installation method - type A.



Dimensions (mm)

A	270.0	G	145.0
B	215.7		
C	119.0		
D	7.0		
E	230.0		
F	325.0		



High Efficiency Motorised Impellers

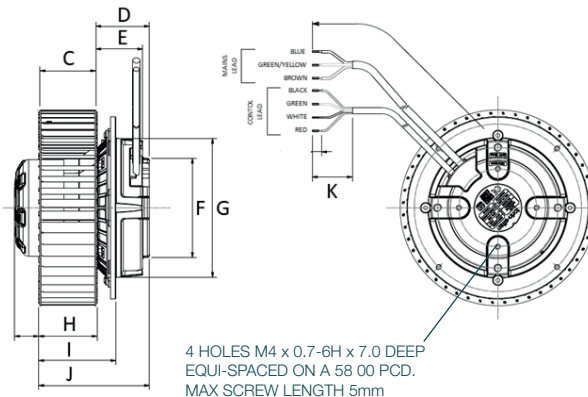
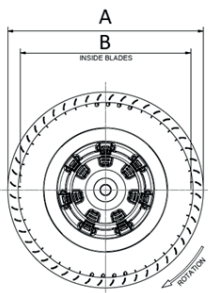
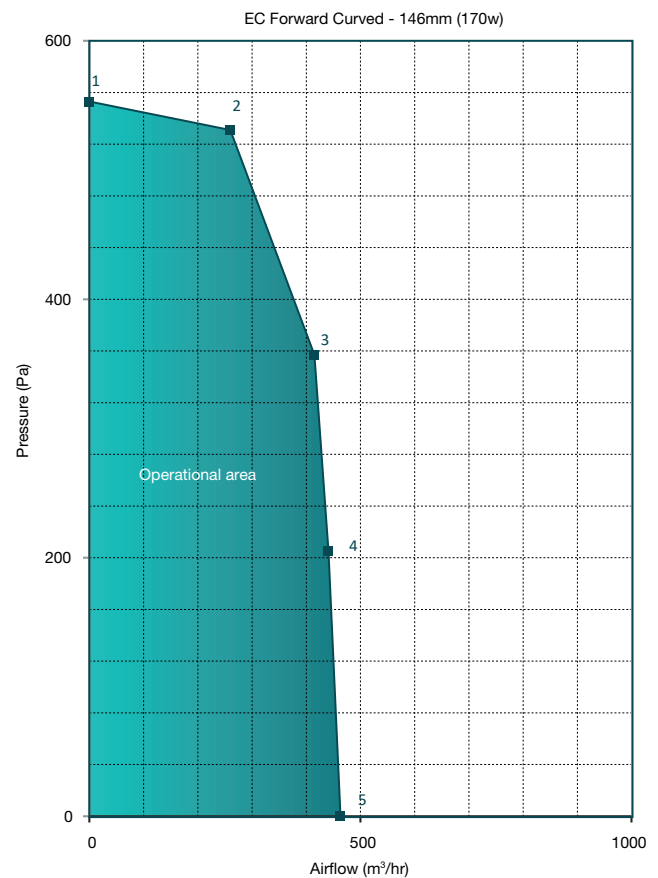
EC Forward Curved - 146mm (170w)

Technical Data

Supply Voltage (rms)	198 to 264 V
Max Airflow	463 m ³ /h
Max Current	1.63 A
Max Input Power	186 W
Max Speed	3000 rpm
ErP Efficiency Rating (FMEG)	53
IP Rating	54
Motor Insulation Class	B
Temperature Range	-20°C to +60°C
Weight	1.38 kg
Direction of Rotation	Clockwise
Number of Blades	48

Performance Data

Data Point	Static Pressure (Pa)	Airflow (m ³ /h)	Current (A)	Speed (rpm)	Power (W)
1	553	0	0.43	3000	46
2	531	260	1.00	3002	109
3	357	415	1.52	3000	171
4	205	441	1.63	2948	186
5	0	463	1.63	2724	185



Dimensions (mm)

A	146.0	G	104.0
B	127.1	H	43.6
C	41.6	I	57.5
D	40.0	J	82.6
E	35.0	K	30.0
F	74.0		



High Efficiency Motorised Impellers

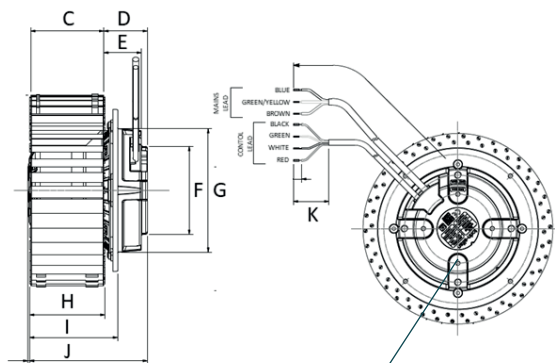
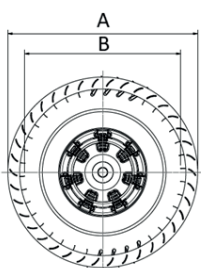
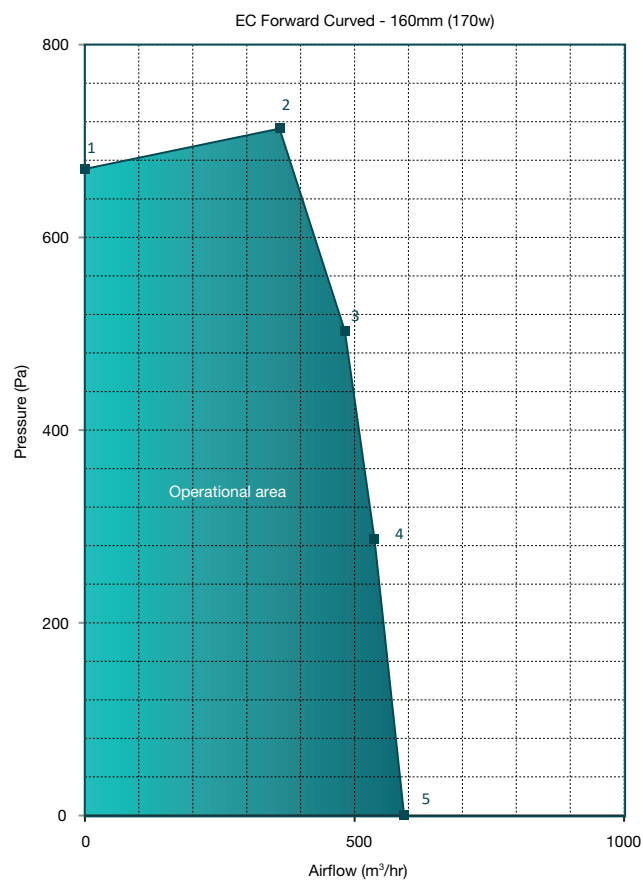
EC Forward Curved - 160mm (170w)

Technical Data

Supply Voltage (rms)	198 to 264 V
Max Airflow	592 m ³ /h
Max Current	1.62 A
Max Input Power	183 W
Max Speed	3000 rpm
ErP Efficiency Rating (FMEG)	60
IP Rating	54
Motor Insulation Class	B
Temperature Range	-20°C to +60°C
Weight	1.49 kg
Direction of Rotation	Clockwise
Number of Blades	38

Performance Data

Data Point	Static Pressure (Pa)	Airflow (m ³ /h)	Current (A)	Speed (rpm)	Power (W)
1	671	0	0.59	2996	62
2	713	361	1.55	2998	176
3	503	482	1.61	2632	182
4	287	537	1.62	2335	183
5	0	592	1.62	2052	182



4 HOLES M4 x 0.7-6H x 7.0 DEEP
EQUI-SPACED ON A 58.00 PCD.
MAX SCREW LENGTH 5mm

Dimensions (mm)

A	160.0	G	104.0
B	131.7	H	63.6
C	61.6	I	74.2
D	36.7	J	99.3
E	31.7	K	30.0
F	74.0		



High Efficiency Single-Inlet Fans

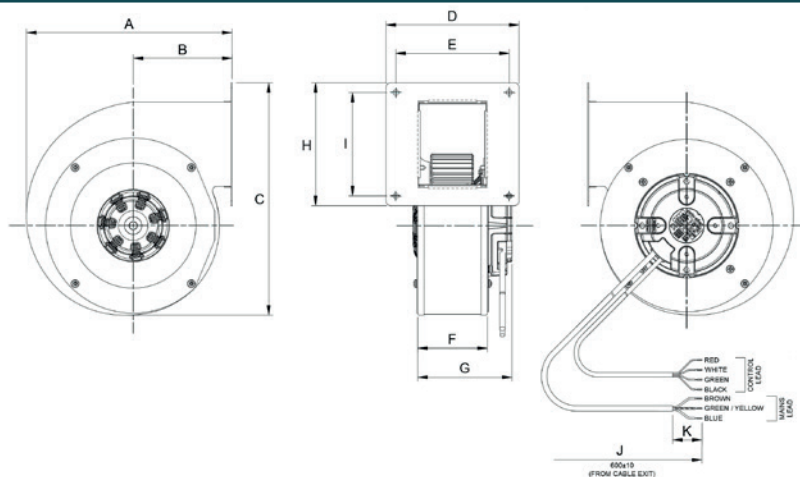
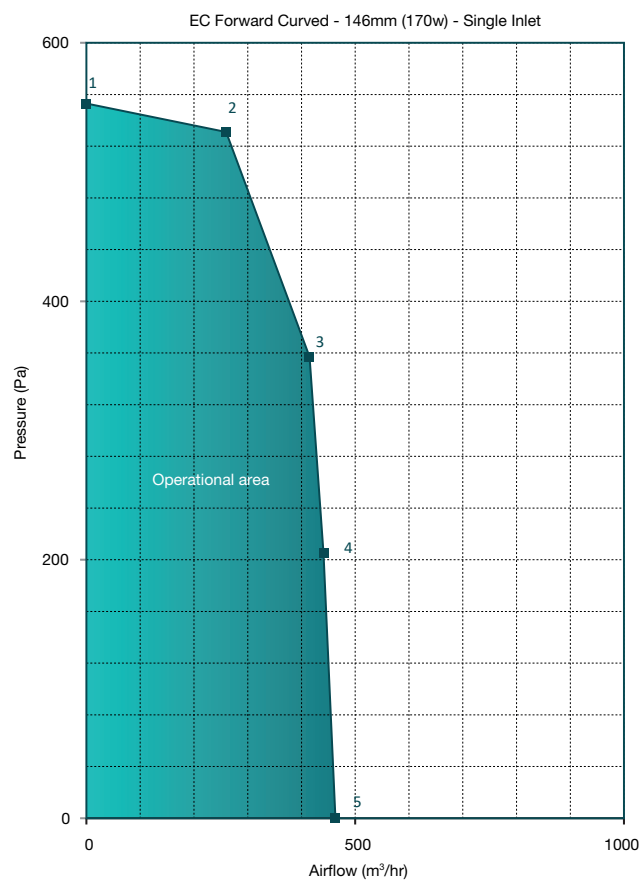
EC Forward Curved - 146mm (170w)

Technical Data

Supply Voltage (rms)	198 to 264 V
Max Airflow	463 m ³ /h
Max Current	1.63 A
Max Input Power	186 W
Max Speed	3000 rpm
ErP Efficiency Rating (FMEG)	53
IP Rating	54
Motor Insulation Class	B
Temperature Range	-20°C to +60°C
Weight	2.40 kg
Direction of Rotation	Clockwise
Number of Blades	48

Performance Data

Data Point	Static Pressure (Pa)	Airflow (m ³ /h)	Current (A)	Speed (rpm)	Power (W)
1	553	0	0.43	3000	46
2	531	260	1.00	3002	109
3	357	415	1.52	3000	171
4	205	441	1.63	2948	186
5	0	463	1.63	2724	185



Dimensions (mm)

A	208.7	G	95.7
B	100.4	H	125.0
C	236.1	I	105.0
D	135.0	J	600.0
E	115.0	K	30.0
F	70.6		



High Efficiency Single-Inlet Fans

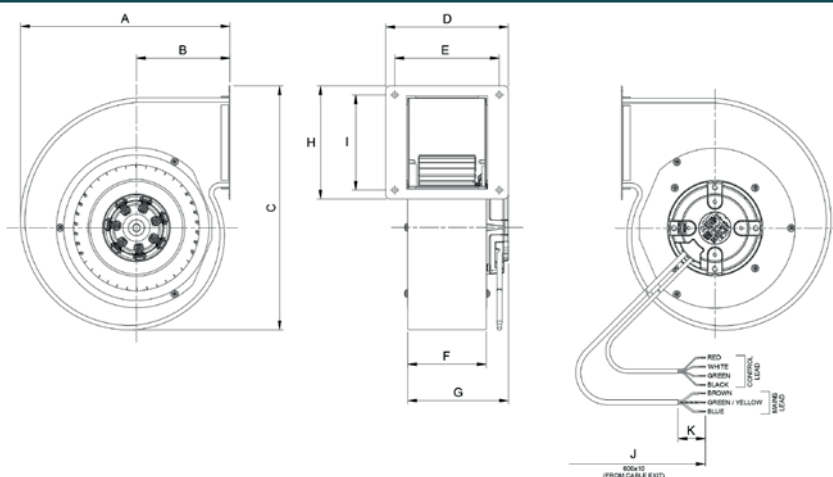
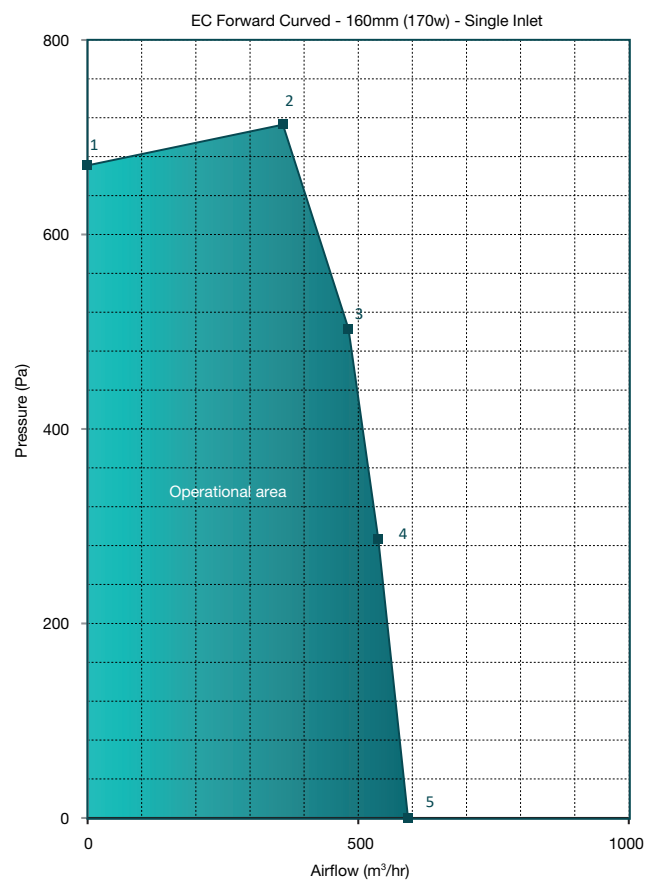
EC Forward Curved - 160mm (170w)

Technical Data

Supply Voltage (rms)	198 to 264 V
Max Airflow	592 m ³ /h
Max Current	1.62 A
Max Input Power	183 W
Max Speed	3000 rpm
ErP Efficiency Rating (FMEG)	60
IP Rating	54
Motor Insulation Class	B
Temperature Range	-20°C to +60°C
Weight	2.60 kg
Direction of Rotation	Clockwise
Number of Blades	38

Performance Data

Data Point	Static Pressure (Pa)	Airflow (m ³ /h)	Current (A)	Speed (rpm)	Power (W)
1	671	0	0.59	2996	62
2	713	361	1.55	2998	176
3	503	482	1.61	2632	182
4	287	537	1.62	2335	183
5	0	592	1.62	2052	182



Dimensions (mm)

A	230.7	G	110.8
B	103.0	H	125.0
C	268.5	I	105.0
D	135.0	J	600.0
E	115.0	K	30.0
F	86.4		



Efficiency with every rotation

Torin, Drakes Way, Greenbridge, Swindon, Wiltshire, United Kingdom. SN3 3JB

Tel
+44 (0) 1793 524291

Fax
+44 (0) 1793 486570

Email
sales@torin.co.uk

www.torin.co.uk