

TEV (60Hz)

TEV-359/3110/559/585/745/768

The TEV is a central extraction fan that is specially designed to remove welding and other fumes, dust, oil mist and exhaust gases.

The fan is intended and designed for mounting filter units and vehicle exhaust extraction systems.



APPLICATIONS

The TEV fans are intended to be used for the following applications:

- MIG-MAG/GMAW welding
- TIG welding
- FCAW welding
- stick/MMAW welding
- vehicle exhaust extraction systems



Do **not** use the TEV fans for the following applications or in the following circumstances:

- aluminium laser cutting
- extraction of aggressive fumes and gases (e.g. from acids, alkaline or soldering paste containing lithium)
- extraction of hot gases (more than 80°C/176°F continuously)
- grinding aluminium and magnesium
- flame spraying
- extraction of cement, saw dust, wood dust, etc.
- explosive environments or explosive substances/gases



SPECIFICATIONS

Physical dimensions and properties

Material:	• fan • aluminium • housing • sheet metal
Color housing	grey (RAL 7035)
Motor design	NEMA
Fan type	centrifugal
Impeller	backward inclined
Discharge position	90° rotatable
Design conditions	20°C (68°F) at sea level
Max. airflow temperature	80°C/176°F continuously

Performance

Max. starts/stops per hour	30
----------------------------	----

Ambient conditions

Operating temperature:	• min. -20°C (-4°F) • nom. 20°C (68°F) • max. 40°C (104°F)
Max. relative humidity	80%

Storage conditions	• -20 to 40°C (-4 to 104°F) • relative humidity max. 80%
--------------------	---

Options and accessories

Outlet transition from rectangular to round

• TOL-250	• TEV-359/3110
• TOL-315	• TEV-559/585
• TOL-400	• TEV-745/768

Soft connection for noise and vibration free connection to duct (to be installed with outlet transition TOL)

• SC-200	• TEV-359/3110 (inlet)
• SC-250	• TEV-359/3110 (outlet)
	• TEV-559/585 (inlet)
• SC-315	• TEV-559/585 (outlet)
	• TEV-745/768 (inlet)
• SC-400	• TEV-746/768 (outlet)

Vibration dampers to isolate noise and vibration in sensitive environments

• TEV-AV/35	• TEV-359/3110/559/585
• TEV-AV/79	• TEV-745/768

Set consisting of TOL, 2 x SC and TEV-AV

• TEV-KIT/3	• TEV-359/3110
• TEV-KIT/5	• TEV-559/585
• TEV-KIT/7	• TEV-745/768

Scope of supply

Extraction fan

Shipping data

Number/package	1
----------------	---

APPROVALS/CERTIFICATES



Directive 2011/65/EC (RoHS)
valid as of 8 June 2011

	Plymovent certifies that the products shown herein are licensed to bear the AMCA Seal. The ratings shown comply with the requirements of the AMCA Certified Ratings Program.
	Certified motor
	Certified motor

NOISE LEVEL

	Static pressure (in. WG)	Noise level in dB(A)			
		at 1 m (3.3 ft)	at 2 m (6.5 ft)	at 3 m (9.8 ft)	at 4 m (13.1 ft)
TEV-359	0	84	78	74	72
	1	83	77	73	71
	2	82	76	72	70
	3	82	76	72	70
	4	80	74	70	68
TEV-3110	0	87	81	77	75
	1	86	80	76	74
	2	86	80	76	74
	3	86	80	76	74
	4	86	80	76	74
TEV-559	0	88	82	78	76
	1	89	83	79	77
	2	89	83	79	77
	3	89	83	79	77
	4	88	82	78	76
	5	88	82	78	76

	Static pressure (in. WG)	Noise level in dB(A)			
		at 1 m (3.3 ft)	at 2 m (6.5 ft)	at 3 m (9.8 ft)	at 4 m (13.1 ft)
TEV-585	0	95	89	85	83
	1	95	89	85	83
	2	94	88	84	82
	3	94	88	84	82
	4	93	87	83	81
	5	92	86	82	80
TEV-745	0	92	86	82	80
	2	91	85	81	79
	4	90	84	80	78
	6	89	83	79	77
	8	89	83	79	77
TEV-768	0	97	91	87	85
	2	96	90	86	84
	4	95	89	85	83
	6	95	89	85	83
	8	95	89	85	83

ARTICLE NUMBERS, WEIGHTS AND PACKING DIMENSIONS

Fan type	Connection voltage	Article number	Weight		Packing dimensions
			Net	Gross*)	
TEV-359	115/208-230V/1ph/60Hz	0000102927	114.6 lbs	144.4 lbs	31.5 x 39.4 x 31.5 in.
	208-230/460V/3ph/60Hz	0000102928	105.8 lbs	135.6 lbs	31.5 x 39.4 x 31.5 in.
	575V/3ph/60Hz	0000102929	117.9 lbs	147.7 lbs	33.5 x 29.5 x 31.5 in.
TEV-3110	208-230/460V/1ph/60Hz	0000102930	120.2 lbs	149.9 lbs	31.5 x 39.4 x 31.5 in.
	208-230/460V/3ph/60Hz	0000102931	117.9 lbs	137.8 lbs	25.6 x 32.3 x 31.1 in.
	575V/3ph/60Hz	0000102932	110.2 lbs	140.0 lbs	33.5 x 29.5 x 31.5 in.
TEV-559	208-230/460V/1ph/60Hz	0000102933	208.3 lbs	238.1 lbs	31.5 x 39.4 x 37.8 in.
	208-230/460V/3ph/60Hz	0000102934	191.8 lbs	221.6 lbs	31.5 x 39.4 x 37.4 in.
	575V/3ph/60Hz	0000102935	205.0 lbs	234.8 lbs	33.5 x 29.5 x 37.4 in.
TEV-585	208-230/460V/1ph/60Hz	0000102936	207.2 lbs	237.0 lbs	31.5 x 39.4 x 37.8 in.
	208-230/460V/3ph/60Hz	0000102937	203.9 lbs	223.8 lbs	25.6 x 32.3 x 37.4 in.
	575V/3ph/60Hz	0000102938	192.9 lbs	222.7 lbs	33.5 x 29.5 x 37.4 in.
TEV-745	208-230/460V/1ph/60Hz	0000102939	330.7 lbs	363.8 lbs	31.5 x 47.2 x 49.2 in.
	208-230/460V/3ph/60Hz	0000102940	347.2 lbs	377.0 lbs	31.9 x 47.2 x 44.9 in.
	575V/3ph/60Hz	0000102941	324.1 lbs	353.8 lbs	31.9 x 47.2 x 49.2 in.
TEV-768	208-230/460V/3ph/60Hz	0000102942	341.7 lbs	371.5 lbs	31.9 x 47.2 x 49.2 in.
	575V/3ph/60Hz	0000102943	336.2 lbs	366.0 lbs	31.9 x 47.2 x 49.2 in.

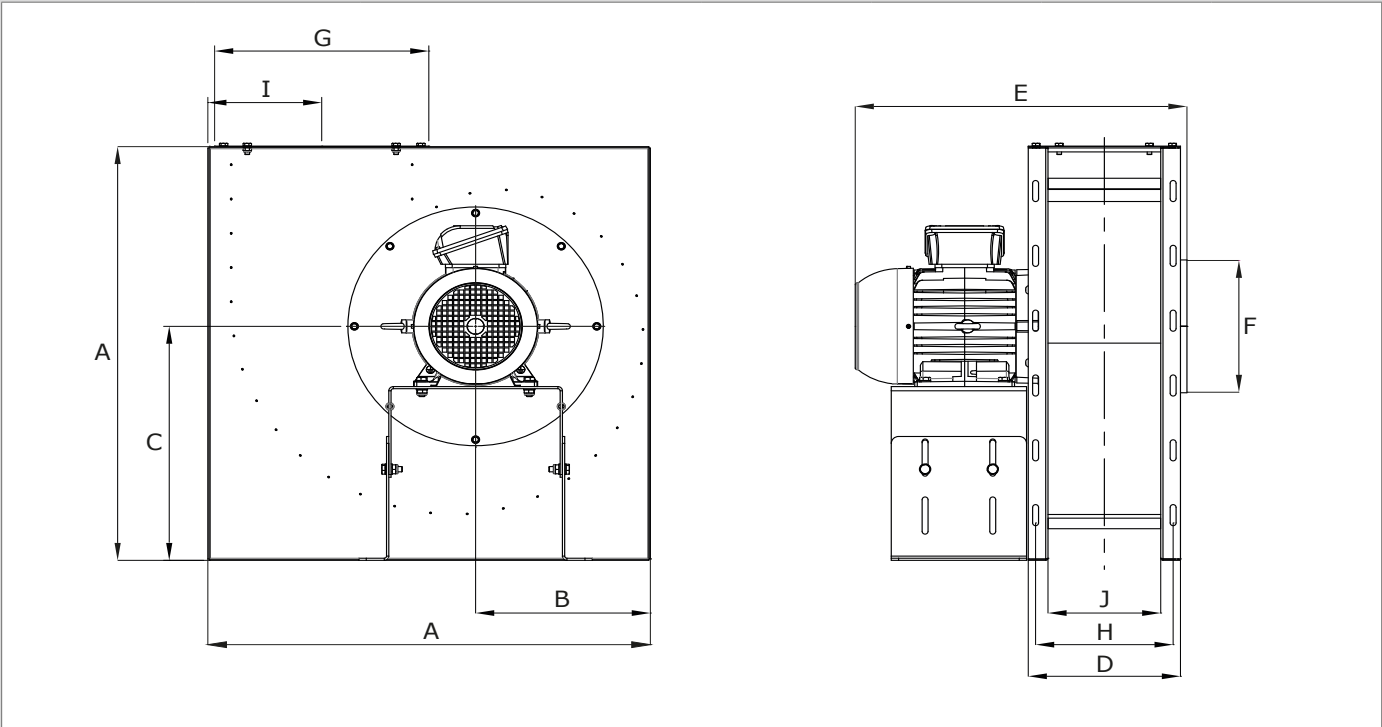
*) Gross weight = including packaging

Remaining specifications: refer to next pages.

Product type	TEV (60Hz)
Article no.	refer to tables
Product category	extraction fans
Version	140316/A

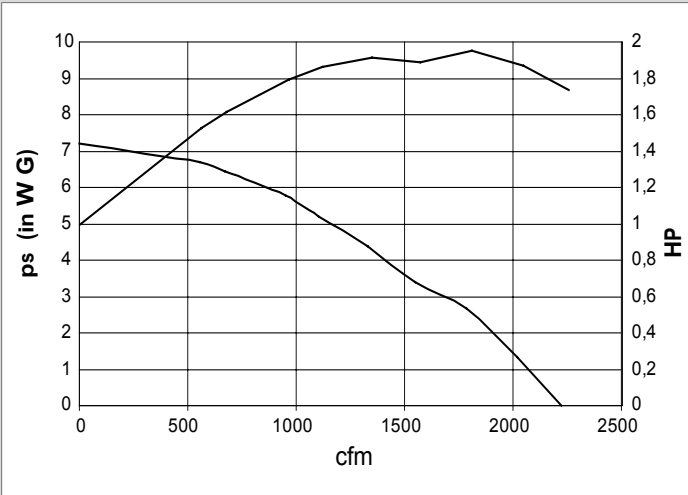
Always check the latest version on www.plymovent.com

DIMENSIONS

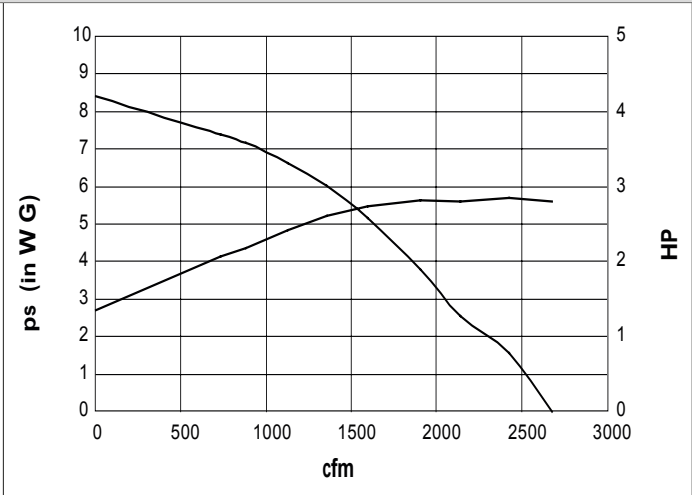


	TEV-359 TEV-3110		TEV-559 TEV-585		TEV-745 TEV-768	
	mm	inch	mm	inch	mm	inch
A	640	25.2	785	30.9	980	38.6
B	267	10.5	310	12.2	402	15.8
C	355	14.0	444	17.5	603	23.7
D	230	9.1	270	10.6	290	11.4
E	1~ motor	524	617	24.3	686	27.0
	3~ motor	494	588	23.1	688	27.1
F	Ø 200	Ø 7.9	Ø 250	Ø 9.8	Ø 315	Ø 12.4
G	312	12.3	380	15.0	460	18.1
H	204	8.0	244	9.6	264	10.4
I	163	6.4	202	8.0	242	9.5
J	160	6.3	200	7.9	220	8.7

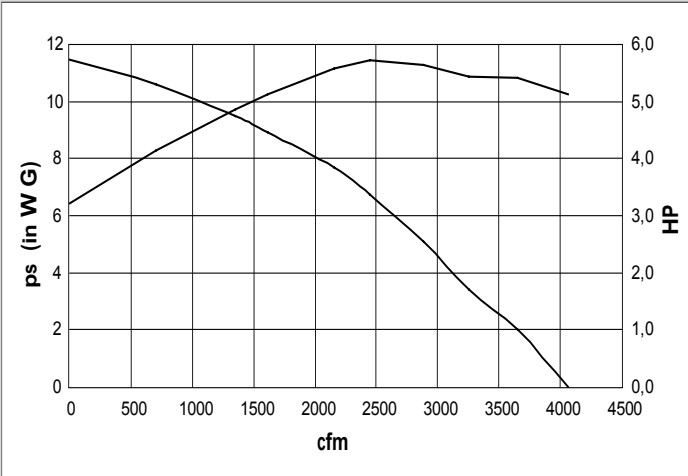
PRESSURE DROP



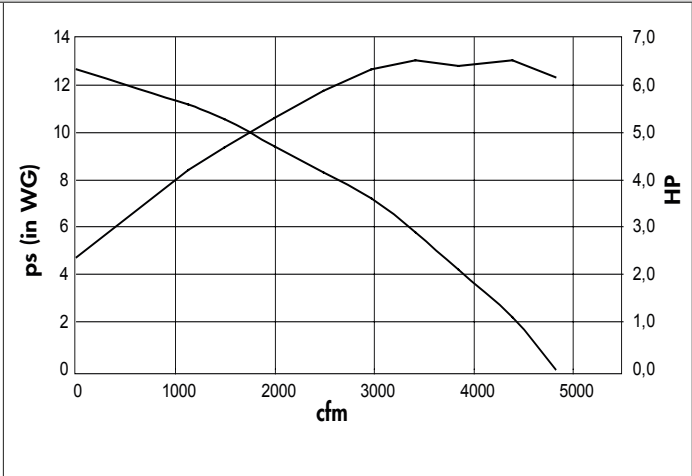
TEV-359



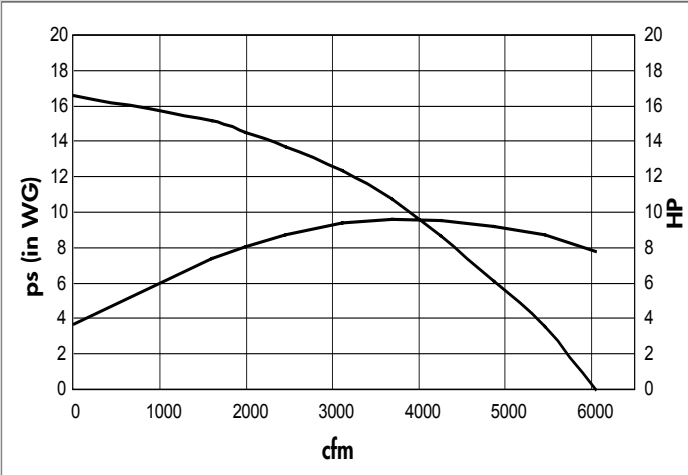
TEV-3110



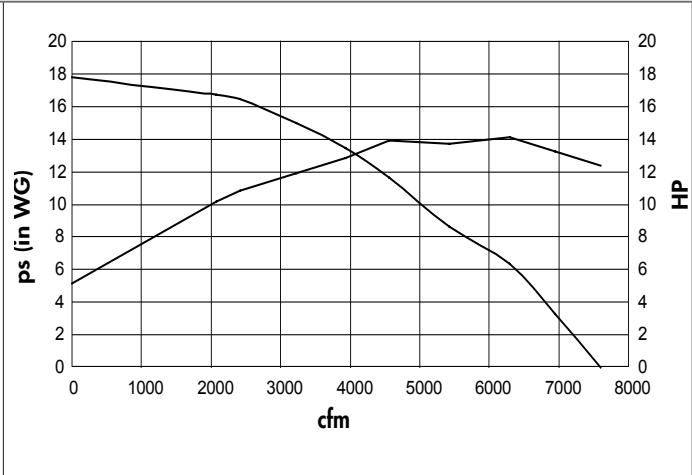
TEV-559



TEV-585



TEV-745



TEV-768

MOTOR SPECIFICATIONS TEV-359 | TEV-3110 | TEV-559

	TEV-359			TEV-3110			TEV-559		
Power	1.5 kW (2 HP)			2.2 kW (3 HP)			3.7 kW (5 HP)		
Energy efficiency (NEMA)	premium			premium			premium		
Rated voltage	115/208-230V	208-230/460V	575V	208-230/460V	208-230/460V	575V	208-230/460V	208-230/460V	575V
No. of phases	1ph	3ph	3ph	1ph	3ph	3ph	1ph	3ph	3ph
Frequency	60Hz	60Hz	60Hz	60Hz	60Hz	60Hz	60Hz	60Hz	60Hz
Frame	143TC	143T	143T	145T	145T	145T	143T	143T	143T
Poles	2	2	2	2	2	2	2	2	2
Rated speed	3520 rpm	3480 rpm	3480 rpm	3500 rpm	3460 rpm	3460 rpm	3500 rpm	3500 rpm	3500 rpm
Slip	2.22%	3.33%	3.33%	2.78%	3.89%	3.89%	2.78%	2.78%	2.78%
Rated current	19.6/10.2-9.80 A	5.60-5.12/2.56 A	2.05 A	14.6-13.5/6.75 A	8.21-7.42/3.71 A	2.97 A	22.5-21.0/10.5 A	13.1-11.8/5.90 A	4.72 A
L. R. Amperes	157/78.4 A	45.6/22.8 A	18.2 A	94.5/47.3 A	60.1/30.1 A	24.0 A	164/81.9 A	88.5/44.3 A	35.4 A
II/In	8.0 Code L	8.9 Code L	8.9 Code L	7.0 Code J	8.1 Code J	8.1 Code J	7.8 Code J	7.5 Code H	7.5 Code H
No load current	9.80/4.90 A	1.98/0.990 A	0.792 A	5.30/2.65 A	3.08/1.54 A	1.23 A	8.00/4.00 A	4.40/2.20 A	1.76 A
Rated torque	4.04 Nm	4.09 Nm	4.09 Nm	6.10 Nm	6.17 Nm	6.17 Nm	10.2 Nm	10.2 Nm	10.2 Nm
Locked rotor torque	220%	350%	350%	210%	330%	330%	280%	230%	230%
Breakdown torque	230%	380%	380%	230%	360%	360%	260%	350%	350%
Design		B	B		B	B		B	B
Insulation class	F	F	F	F	F	F	F	F	F
Temperature rise		80 K	80 K		80 K	80 K		80 K	80 K
Locked rotor time	6 s (hot)	17 s (hot)	17 s (hot)	8 s (hot)	14 s (hot)	14 s (hot)	8 s (hot)	25 s (hot)	25 s (hot)
Service factor	1.15	1.25	1.25	1.15	1.25	1.25	1.15	1.25	1.25
Duty cycle	S1	S1	S1	S1	S1	S1	S1	S1	S1
Ambient temperature	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)
Altitude	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level
Enclosure	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)
Mounting	B34T	B34T	B34T	B34T	B34T	B34T	B34T	B34T	B34T
Rotation	both	both	both	both	both	both	both	both	both
Preferred preset rotation direction	CCW, seen from drive end side			CCW, seen from drive end side			CCW, seen from drive end side		
Approx. weight	25.0 kg (55.1 lbs)	23.5 kg (51.8 lbs)	23.5 kg (51.8 lbs)	27.9 kg (61.5 lbs)	23.5 kg (51.8 lbs)	23.5 kg (51.8 lbs)	46.7 kg (103.0 lbs)	40.0 kg (88.2 lbs)	40.0 kg (88.2 lbs)
Moment of inertia	0.0023 kgm ²	0.0026 kgm ²	0.0026 kgm ²	0.0028 kgm ²	0.0026 kgm ²	0.0026 kgm ²	0.0080 kgm ²	0.0094 kgm ²	0.0094 kgm ²
Sound pressure level (global)		68.0 dB(A)	68.0 dB(A)		68.0 dB(A)	68.0 dB(A)		69.0 dB(A)	69.0 dB(A)
Foundation loads: • max. traction • max. compression		340 N 571 N	340 N 571 N	274 N 548 N	55 kgf 78 kgf	536 N 766 N	339 N 797 N	568 N 961 N	568 N 961 N
Load: 100% • Power factor • Efficiency	0.86 79.0%	0.86 85.5%	0.86 85.5%	0.90 79.0%	0.86 86.5%	0.86 86.5%	0.92 83.0%	0.89 88.5%	0.89 88.5%
Load: 75% • Power factor • Efficiency	0.81 76.0%	0.80 85.5%	0.80 85.5%	0.87 78.5%	0.81 86.5%	0.81 86.5%	0.89 82.5%	0.85 88.5%	0.85 88.5%
Load: 50% • Power factor • Efficiency	0.71 71.0%	0.71 82.5%	0.71 82.5%	0.79 75.0%	0.70 85.5%	0.70 85.5%	0.81 80.0%	0.76 86.5%	0.76 86.5%

MOTOR SPECIFICATIONS TEV-585 | TEV-745 | TEV-768

	TEV-585			TEV-745			TEV-768	
Power	5.5 kW (7.5 HP)			7.5 kW (10 HP)			11 kW (15 HP)	
Energy efficiency (NEMA)	premium			premium			premium	
Rated voltage	208-230/460V	208-230/460V	575V	208-230/460V	208-230/460V	575V	208-230/460V	575V
No. of phases	1ph	3ph	3ph	1ph	3ph	3ph	3ph	3ph
Frequency	60Hz	60Hz	60Hz	60Hz	60Hz	60Hz	60Hz	60Hz
Frame	145T	145T	145T	145T	145T	145T	145T	145T
Poles	2	2	2	2	2	2	2	2
Rated speed	3490 rpm	3485 rpm	3485 rpm	3510 rpm	3515 rpm	3515 rpm	3510 rpm	3510 rpm
Slip	3.06%	3.19%	3.19%	2.50%	2.36%	2.36%	2.50%	2.50%
Rated current	33.0-31.0/15.5 A	19.4-17.5/8.76 A	7.01 A	43.2-38.8/19.4 A	25.7-23.2/11.6 A	9.28 A	37.6-34.0/17.0 A	13.6 A
L. R. Amperes	242/121 A	144/71.8 A	57.5 A	264/132 A	167/83.5 A	66.8 A	258/129 A	103 A
II/In	7.8 Code J	8.2 Code J	8.2 Code J	6.8 Code G	7.2 Code H	7.2 Code H	7.6 Code H	7.6 Code H
No load current	11.5/5.75 A	6.51/3.26 A	2.61 A	8.20/4.10 A	6.00/3.00 A	2.40 A	12.3/6.15 A	4.92 A
Rated torque	15.3 Nm	15.3 Nm	15.3 Nm	20.3 Nm	20.3 Nm	20.3 Nm	30.4 Nm	30.4 Nm
Locked rotor torque	280%	270%	270%	220%	210%	210%	240%	240%
Breakdown torque	250%	330%	330%	270%	290%	290%	280%	280%
Design		B	B		B	B	B	B
Insulation class	F	F	F	F	F	F	F	F
Temperature rise		80 K	80 K		80 K	80 K	80 K	80 K
Locked rotor time	8 s (hot)	17 s (hot)	17 s (hot)	8 s (hot)	24 s (hot)	24 s (hot)	14 s (hot)	14 s (hot)
Service factor	1.15	1.25	1.25	1.15	1.25	1.25	1.25	1.25
Duty cycle	S1	S1	S1	S1	S1	S1	S1	S1
Ambient temperature	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)	-20°C to +40°C (-4°F to 104°F)
Altitude	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level	1000 m (3280 ft) above sea level
Enclosure	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)	IP55 (TEFC)
Mounting	B34T	B34T	B34T	B34T	B34T	B34T	B34T	B34T
Rotation	both	both	both	both	both	both	both	both
Preferred preset rotation direction	CCW, seen from drive end side			CCW, seen from drive end side				
Approx. weight	50.3 kg (110.9 lbs)	42.0 kg (92.6 lbs)	42.0 kg (92.6 lbs)	71.5 kg (156.5 lbs)	74.0 kg (156.5 lbs)	74.0 kg (156.5 lbs)	74.0 kg (163.1 lbs)	74.0 kg (163.1 lbs)
Moment of inertia	0.0095 kgm ²	0.0095 kgm ²	0.0095 kgm ²	0.0223 kgm ²	0.0268 kgm ²	0.0268 kgm ²	0.0268 kgm ²	0.0268 kgm ²
Sound pressure level (global)		69.0 dB(A)	69.0 dB(A)		72.0 dB(A)	72.0 dB(A)	72.0 dB(A)	72.0 dB(A)
Foundation loads: • max. traction • max. compression	575 N 1068 N	880 N 1292 N	880 N 1292 N	687 N 1388 N	750 N 1476 N	750 N 1476 N	1251 N 1977 N	1251 N 1977 N
Load: 100% • Power factor • Efficiency	0.95 84.0%	0.88 89.5%	0.88 89.5%	0.95 86.0%	0.90 90.2%	0.90 90.2%	0.89 91.0%	0.89 91.0%
Load: 75% • Power factor • Efficiency	0.92 83.5%	0.84 89.5%	0.84 89.5%	0.94 85.0%	0.87 90.2%	0.87 90.2%	0.85 91.0%	0.85 91.0%
Load: 50% • Power factor • Efficiency	0.87 80.0%	0.75 88.5%	0.75 88.5%	0.91 83.0%	0.79 89.5%	0.79 89.5%	0.76 90.2%	0.76 90.2%