



***External forced cooling system***

# ***EFC Series***

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Powerful, efficient and flexible...

**Technical catalogue**



# Quality management and certificates



VYBO Electric is a modern High-tech energy saving company that pays high attention to quality, environment, safety and precision and efficiency of work and energy in production. Therefore, it holds a lot of certificates and quality control systems. **Our priority is quality control.**

## Basic certificates include:

### ISO9001

The primary task of the ISO 9001 standard is to focus on system management and quality management in the organization. The satisfaction of the customer and the fulfillment of his requirements, which are specified in contracts, orders, or technical drawings, are in the first place. The quality management system is linked to all processes in the company. The standard focuses on the management of human and financial resources, on the stability of infrastructure, including buildings, transport, hardware, software and other communication or information technologies. An important part is also the planning of production and services, the management of the purchasing process, but also the management of non-conforming products.



### ISO14001

The main priority of the ISO 14001 standard is to identify and understand the environmental aspects and activities that are related to the entire infrastructure of the company and, based on this, to regulate the environmental impact on the environment.

In its scope, the ISO 14001 standard creates the conditions for determining environmental goals and plans, the fulfillment of which is examined at regular intervals by top management and also by an independent body during internal audits.

This standard is intended for all organizations and companies that consider environmental protection as their primary goal.

The benefit of the standard for society is mainly:

- control over the environmental impact on the environment
- control over produced emissions and waste
- saving material and energy
- prevention of accidents
- compliance of the company's activities with legal requirements
- zero fines for environmental behavior
- creation of a good reputation and prestige of the company



## The ISO 45001

Specification (formerly known as OHSAS 18001) is an internationally recognized standard that declares compliance with the principles of a safe enterprise, managing risks at work and protecting the health of workers during work. It does not only concern danger and accidents, but also emphasizes other aspects such as the good condition and mental well-being of the employee.

The certificate is held in Slovakia as STN ISO 45001:2019 and is under the title Management systems of safety and health protection at work. Requirements with guidance for use. It replaces the STN OHSAS 18001 standard.



## ISO50001

Energy management systems Energy efficiency help organizations save money, save energy resources and also help to prevent climate change. ISO 50001 encourages organizations in all sectors to use energy more efficiently through the development of an energy management system. The international standard ISO 50001: 2011 specifies the requirements for building, maintaining and improving the energy system. It aims to enable organizations to implement a systematic approach that will help achieve lasting improvements in energy efficiency, energy use and consumption.



# Innovation

## High energy-efficient

According to the requirements of our downstream customers, we design and customize the forced ventilation units for frequency conversion motors, two-speed motors and so on. It can not only improve the efficiency of electricity, but also can maximize the efficiency of the use of energy.

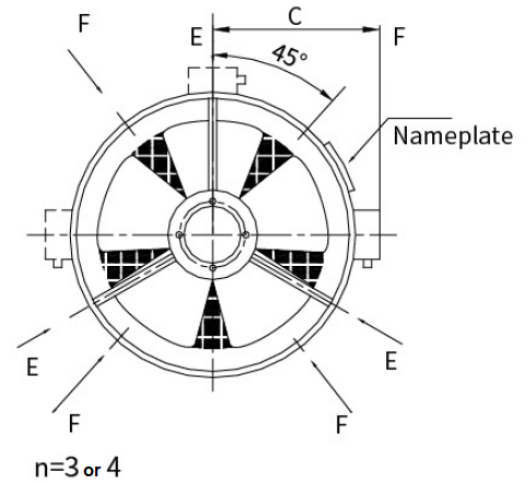
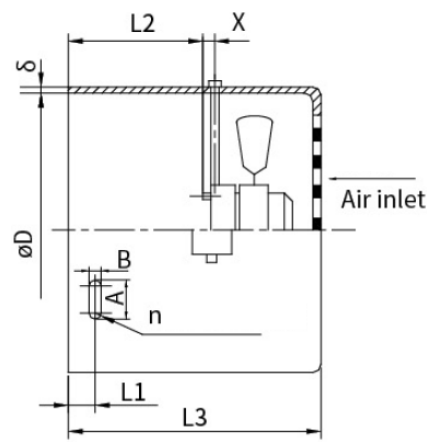
## Professional Customization

VYBO Electric not only provides specialized general types of motor cooling fans for the manufacturers, but also provides the products which can meet the requirements of our terminal customers. After all-round participation of the design and R&D of our upstream products, we have strengthened our products adaptability to market and remained the cooperation with our downstream customers. Our goal is to create more value for our customers.





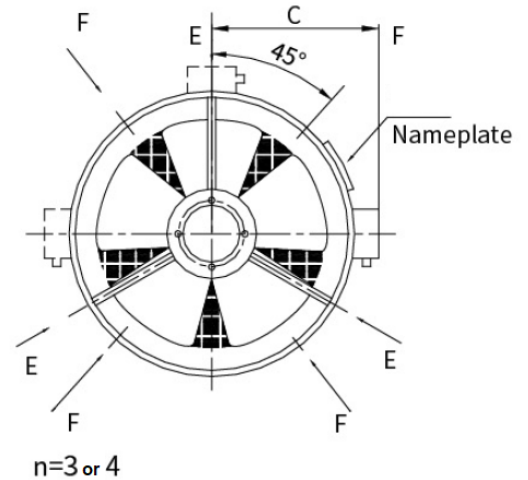
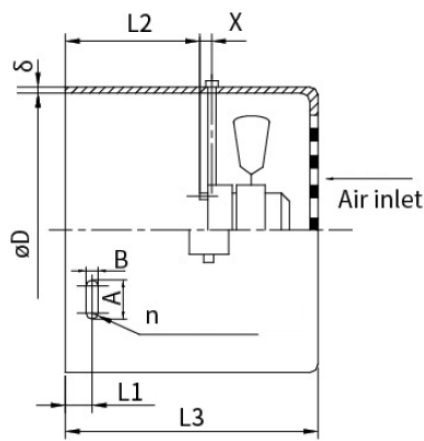
# Type: EFC-A1 (External Rotor Motor)



Model	$\Phi D$	L1	L2	X	L3	$\delta$	A	B	n	C
EFC-A1-63A1	121 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	10 $\pm 1$	35 $\pm 3$	10	125	1,2	10	6	3	115
EFC-A1-71A1	136 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	12,5 $\pm 1$	35 $\pm 3$	10	125	1,2	10	6	3	120
EFC-A1-80A1	155 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	15 $\pm 1$	50 $\pm 3$	10	137	1,2	10	6	3	130
EFC-A1-90A1	175 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	15 $\pm 1$	55 $\pm 3$	10	142	1,2	10	6	3	140
EFC-A1-100A1	193 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	15 $\pm 1$	55 $\pm 3$	10	155	1,2	12	7	3	151
EFC-A1-112A	217 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	17 $\pm 1$	55 $\pm 3$	10	155	1,2	12	7	3	163
EFC-A1-132A1	258 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	17 $\pm 1$	60 $\pm 3$	10	165	1,2	12	7	3	182
EFC-A1-160A1	314 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	20 $\pm 1$	92 $\pm 5$	10	215	1,5	12	7	4	210
EFC-A1-180A1	352 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	35 $\pm 1$	118 $\pm 5$	10	235	1,5	12	7	4	231
EFC-A1-200A1	393 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	40 $\pm 1$	130 $\pm 5$	10	260	1,5	15	9	4	252
EFC-A1-225A1	443 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	45 $\pm 1$	141 $\pm 5$	15	300	1,5	15	9	4	276
EFC-A1-250A1	482 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	55 $\pm 1$	158 $\pm 5$	15	320	1,5	15	9	4	296
EFC-A1-280A1	546 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	65 $\pm 1$	167 $\pm 5$	15	335	2	20	11	4	362
EFC-A1-315A1	614 $\begin{smallmatrix} +2 \\ 0 \end{smallmatrix}$	75 $\pm 1$	185 $\pm 5$	30	390	2	25	11	4	398
EFC-A1-355A1	694 $\begin{smallmatrix} +2 \\ 0 \end{smallmatrix}$	82 $\pm 1$	195 $\pm 5$	30	410	2,5	25	13	4	437



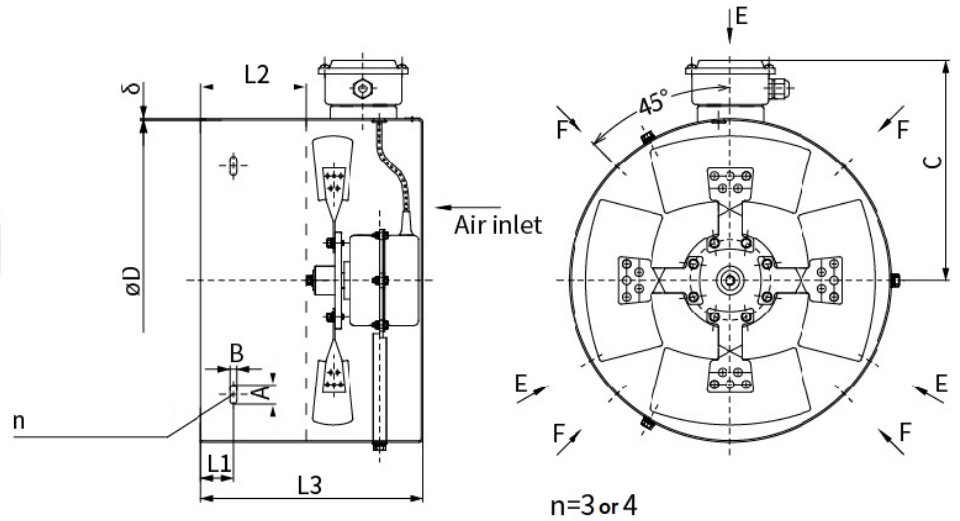
# Type: EFC-A1 (External Rotor Motor)



Model	Frame size	Voltage V	Frequency Hz	Power W	Current A	Speed rpm	Air flow m <sup>3</sup> /h	Air pressure Pa	Noise dB (A)	Protection
EFC-A1-63A1	68-13	380	50	25	0,09	2800	45	40	62	54/55
EFC-A1-71A1	68-13	380	50	35	0,09	2850	52	50	62	54/55
EFC-A1-80A1	68-13	380	50	45	0,09	2650	58	60	62	54/55
EFC-A1-90A1	68-13	380	50	45	0,09	2600	91	80	65	54/55
EFC-A1-100A1	92-15	380	50	65	0,15	2750	142	80	67	54/55
EFC-A1-112A1	92-15	380	50	80	0,15	2550	229	80	67	54/55
EFC-A1-132A1	92-24	380	50	55	0,23	1430	337	35	69	54/55
EFC-A1-160A1	92-32	380	50	60	0,28	1400	609	40	72	54/55
EFC-A1-180A1	92-32	380	50	85	0,28	1350	686	55	72	54/55
EFC-A1-200A1	92-32	380	50	110	0,28	1200	1679	65	72	54/55
EFC-A1-225A1	102-48	380	50	170	0,40	1450	1786	70	74	54/55
EFC-A1-250A1	102-55	380	50	200	0,60	1400	1813	80	75	54/55
EFC-A1-280A1	102-55	380	50	270	0,60	1350	2415	85	78	54/55
EFC-A1-315A1	138-50	380	50	520	1,05	1300	2820	110	81	54/55
EFC-A1-355A1	138-65	380	50	310	0,95	950	3500	80	85	54/55
EFC-A1-355A1	138-65	380	50	600	1,65	1350	4900	150	85	54/55



# Type: EFC-A2 (Internal Rotor Motor)

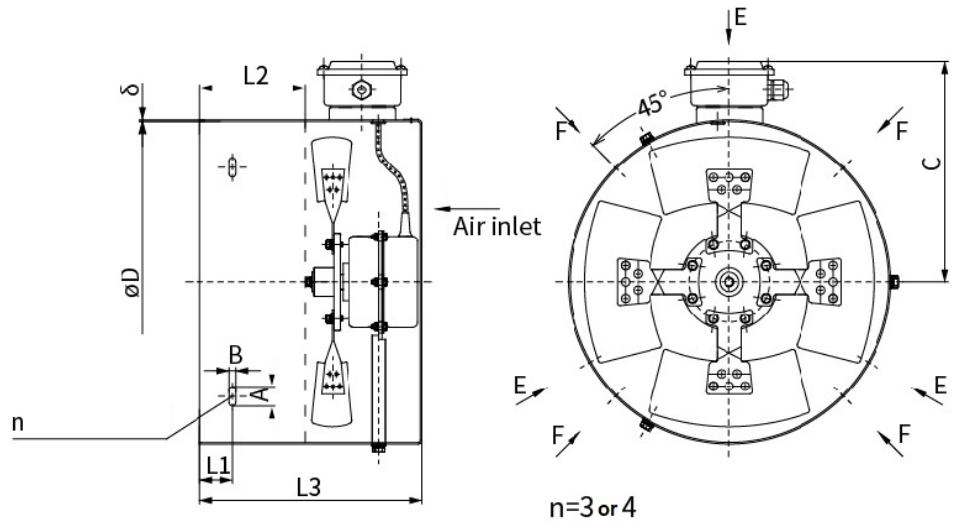


Model	$\Phi D$	L1	L2	L3	$\delta$	A	B	n	C
EFC-A2-63A2-2	121 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	10 $\pm 1$	35 $\pm 3$	125	1,2	10	6	3	115
EFC-A2-71A2-2	136 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	12,5 $\pm 1$	35 $\pm 3$	125	1,2	10	6	3	120
EFC-A2-80A2-2	155 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	15 $\pm 1$	50 $\pm 3$	137	1,2	10	6	3	130
EFC-A2-90A2-2	175 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	15 $\pm 1$	55 $\pm 3$	142	1,2	10	6	3	140
EFC-A2-100A2-2	193 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	15 $\pm 1$	55 $\pm 3$	180	1,2	12	7	3	151
EFC-A2-112A2-2	217 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	17 $\pm 1$	55 $\pm 3$	185	1,2	12	7	3	163
EFC-A2-132A2-2	258 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	17 $\pm 1$	60 $\pm 3$	210	1,2	12	7	3	182
EFC-A2-160A2-2	314 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	20 $\pm 1$	92 $\pm 5$	250	1,5	12	7	4	210
EFC-A2-180A2-2	352 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	35 $\pm 1$	118 $\pm 5$	280	1,5	12	7	4	231
EFC-A2-200A2-2	393 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	40 $\pm 1$	130 $\pm 5$	290	1,5	15	9	4	252
EFC-A2-225A2-2	443 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	45 $\pm 1$	141 $\pm 5$	320	2	15	9	4	276
EFC-A2-250A2-2	482 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	55 $\pm 1$	158 $\pm 5$	355	2	15	9	4	296
EFC-A2-280A2-2	546 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	65 $\pm 1$	167 $\pm 5$	380	2	20	11	4	362
EFC-A2-315A2-2	614 $\begin{smallmatrix} +2 \\ 0 \end{smallmatrix}$	75 $\pm 1$	185 $\pm 5$	465	2	25	11	4	398
EFC-A2-355A2-2	694 $\begin{smallmatrix} +2 \\ 0 \end{smallmatrix}$	82 $\pm 1$	195 $\pm 5$	475	2,5	25	13	4	437





# Type: EFC-A2 (Internal Rotor Motor)

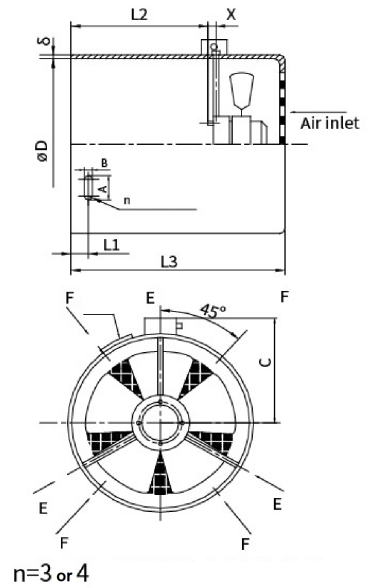


Model	Power W	Voltage V	Frequency Hz	Current A	Speed rpm	Air flow m <sup>3</sup> /h	Air pressure Pa	Noise dB (A)	Protection
EFC-A2-63A2-2	30	380	50	0,09	2800	45	40	62	55
EFC-A2-71A2-2	30	380	50	0,09	2800	52	50	62	55
EFC-A2-80A2-2	30	380	50	0,09	2800	80	60	62	55
EFC-A2-90A2-2	30	380	50	0,09	2800	180	80	65	55
EFC-A2-100A2-2	60	380	50	0,18	2800	300	80	67	55
EFC-A2-112A2-2	60	380	50	0,18	1400	370	80	67	55
EFC-A2-132A2-2	45	380	50	0,13	1400	400	35	69	55
EFC-A2-160A2-2	80	380	50	0,20	1400	880	40	72	55
EFC-A2-180A2-2	150	380	50	0,50	1400	1380	55	72	55
EFC-A2-200A2-2	150	380	50	0,50	1400	1800	65	72	55
EFC-A2-225A2-2	250	380	50	0,83	1400	2200	70	74	55
EFC-A2-250A2-2	370	380	50	1,10	1400	3200	80	75	55
EFC-A2-280A2-2	370	380	50	1,10	1400	3500	85	78	55
EFC-A2-315A2-2	550	380	50	1,57	1400	4200	110	81	55
EFC-A2-355A2-2	750	380	50	1,91	1400	6500	120	85	55



# Type: EFC-B (Long length fan)

This series of forced ventilation kits are mainly used for AL/LC series motors. The electric motor tails is originally equipped with fan blade mounting shaft. Forced ventilation kits can be used for achieving better cooling effect. The outlet is on the top. Customer should choose this B type forced ventilation kit if they need to add encoder on the basic A type. The extended size of fan cover shall be provided by the customers.

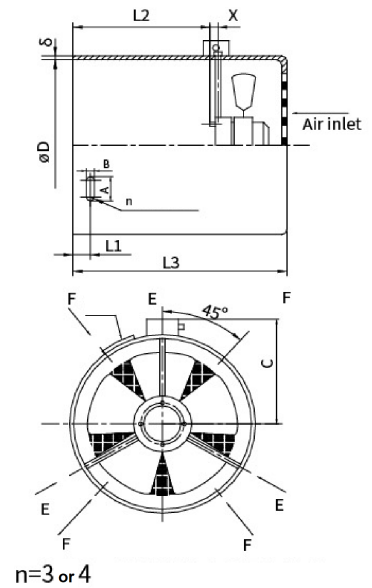


Model	ØD	L1	L2	X	L3	δ	A	B	n	C
EFC-B-63B	121 <sup>+1</sup> <sub>0</sub>	10±1	48	10	138	1,2	12	6	3	115
EFC-B-71B	138 <sup>+1</sup> <sub>0</sub>	13±1	60	10	150	1,2	12	6	3	120
EFC-B-80B	154 <sup>+1</sup> <sub>0</sub>	16,5±1	85	10	175	1,2	12	6	3	130
EFC-B-90B	173 <sup>+1</sup> <sub>0</sub>	17±1	96	10	188	1,2	12	6	3	140
EFC-B-100B	195 <sup>+1</sup> <sub>0</sub>	19±1	96	10	196	1,2	14	7	3	151
EFC-B-112B	219 <sup>+1</sup> <sub>0</sub>	18,5±1	100	10	200	1,2	14	7	3	163
EFC-B-132B	256 <sup>+1</sup> <sub>0</sub>	18,5±1	110	10	217	1,2	14	7	3	182
EFC-B-160B	311 <sup>+1</sup> <sub>0</sub>	20±1	149	10	277	1,5	14	7	4	210
EFC-B-180B	352 <sup>+1</sup> <sub>0</sub>	35±1	190	10	312	1,5	14	7	4	231
EFC-B-200B	393 <sup>+1</sup> <sub>0</sub>	40±1	190	10	314	1,5	17	9	4	252
EFC-B-225B	443 <sup>+1</sup> <sub>0</sub>	45±1	220	15	374	2,0	17	9	4	276
EFC-B-250B	482 <sup>+1</sup> <sub>0</sub>	55±1	240	15	402	2,0	17	9	4	296
EFC-B-280B	546 <sup>+1</sup> <sub>0</sub>	65±1	265	15	429	2,0	25	11	4	362
EFC-B-315B	614 <sup>+2</sup> <sub>0</sub>	75±1	310	-	515	2,0	25	11	4	398
EFC-B-355B	694 <sup>+2</sup> <sub>0</sub>	82±1	380	-	595	2,5	25	13	4	437
EFC-B-400B	786 <sup>+2</sup> <sub>0</sub>	120±1	510	-	785	3,0	25	13	4	485
EFC-B-450B	884 <sup>+2</sup> <sub>0</sub>	162±1	510	-	810	3,0	25	13	4	530



# Type: EFC-B (Long length fan)

This series of forced ventilation kits are mainly used for AL/LC series motors. The electric motor tails is originally equipped with fan blade mounting shaft. Forced ventilation kits can be used for achieving better cooling effect. The outlet is on the top. Customer should choose this B type forced ventilation kit if they need to add encoder on the basic A type. The extended size of fan cover shall be provided by the customers.



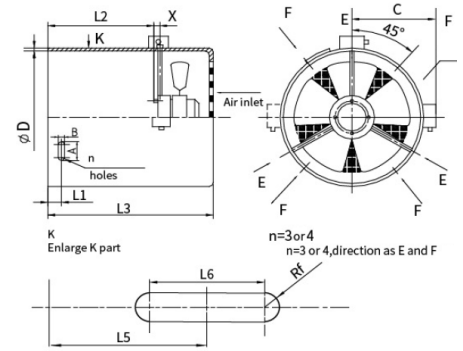
Model	Frame size	Voltage V	Frequency Hz	Power W	Current A	Speed rpm	Air flow m <sup>3</sup> /h	Air pressure Pa	Noise dB (A)	Protection
EFC-B-63B	68-13	380	50	25	0,09	2800	45	40	62	54/55
EFC-B-71B	68-13	380	50	35	0,09	2850	52	50	62	54/55
EFC-B-80B	68-13	380	50	45	0,09	2650	58	60	62	54/55
EFC-B-90B	68-13	380	50	45	0,09	2600	91	80	65	54/55
EFC-B-100B	92-15	380	50	65	0,18	2750	142	80	67	54/55
EFC-B-112B	92-15	380	50	80	0,18	2550	229	80	67	54/55
EFC-B-132B	92-24	380	50	55	0,23	1430	337	35	69	54/55
EFC-B-160B	92-32	380	50	60	0,28	1400	609	40	72	54/55
EFC-B-180B	92-32	380	50	85	0,28	1350	686	55	72	54/55
EFC-B-200B	92-32	380	50	110	0,28	1200	1679	65	72	54/55
EFC-B-225B	102-48	380	50	170	0,40	1450	1786	70	74	54/55
EFC-B-250B	102-55	380	50	200	0,60	1400	1813	80	75	54/55
EFC-B-280B	102-55	380	50	270	0,60	1350	2415	85	78	54/55
EFC-B-315B	0,37-4	380	50	450	1,12	1350	5200	110	81	54/55
EFC-B-355B	0,55-4	380	50	700	2,05	1350	6200	150	85	54/55
EFC-B-400B	1,1-4	380	50	1100	3,10	1350	6500	150	90	54/55
EFC-B-450B	2,2-4	380	50	2200	5,60	1400	8000	180	90	54/55



# Type: EFC-C (Long length fan)

## Fan with Slot of Brake's Handle

According to the drawings or actual samples provided by customers, we produced various special forced ventilation kits with brake slot, special amounting holes, etc.



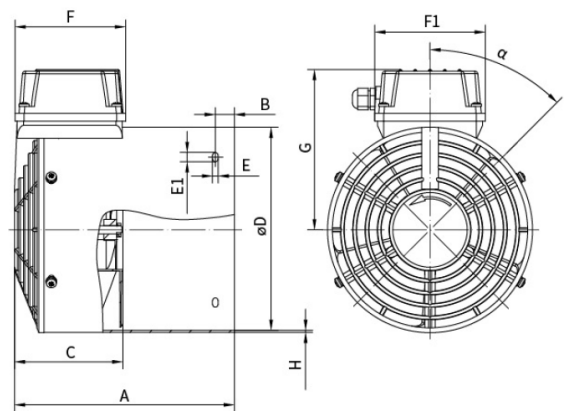
Model	ΦD	L1	L2	X	L3	L5	L6	Rf	δ	A	B	n	C
EFC-C-63C	121 <sup>+1</sup> <sub>0</sub>	6±1	70	10	160	40	25	7,0	1,2	12	6	3	115
EFC-C-71C	136 <sup>+1</sup> <sub>0</sub>	10±1	90	10	180	52	25	7,0	1,2	12	6	3	120
EFC-C-80C	154 <sup>+1</sup> <sub>0</sub>	12±1	94	10	184	52	26	7,5	1,2	12	6	3	130
EFC-C-90C	173 <sup>+1</sup> <sub>0</sub>	14±1	109	10	201	63	26	7,5	1,2	12	6	3	140
EFC-C-100C	195 <sup>+1</sup> <sub>0</sub>	16±1	114	10	214	63	32	7,5	1,2	14	7	3	151
EFC-C-112C	219 <sup>+1</sup> <sub>0</sub>	17±1	122	10	222	67	35	10,0	1,2	14	7	3	163
EFC-C-132C	256 <sup>+1</sup> <sub>0</sub>	20±1	137	10	244	71	35	10,0	1,2	14	7	3	182
EFC-C-160C	311 <sup>+1</sup> <sub>0</sub>	24±1	180	10	308	131	40	10,0	1,5	14	7	4	210
EFC-C-180C	352 <sup>+1</sup> <sub>0</sub>	38±1	230	10	352	150	40	10,0	1,5	14	7	4	231

Model	Frame size	Voltage V	Frequency Hz	Power W	Current A	Speed rpm	Air flow m <sup>3</sup> /h	Air pressure Pa	Noise dB (A)	Protection
EFC-C-63C	68-13	380	50	25	0,09	2800	45	40	62	54/55
EFC-C-71C	68-13	380	50	35	0,09	2850	52	50	62	54/55
EFC-C-80C	68-13	380	50	45	0,09	2650	58	60	62	54/55
EFC-C-90C	68-13	380	50	45	0,09	2600	91	80	65	54/55
EFC-C-100C	92-15	380	50	65	0,18	2750	142	80	67	54/55
EFC-C-112C	92-15	380	50	80	0,18	2550	229	80	67	54/55
EFC-C-132C	92-24	380	50	55	0,23	1430	337	35	69	54/55
EFC-C-160C	92-32	380	50	60	0,28	1400	609	40	72	54/55
EFC-C-180C	92-32	380	50	85	0,28	1350	686	55	72	54/55



# Series EFC-E (extra special forced cooling)

International general structure is used in this type of forced ventilation. It adopts an aluminium housing inner rotor motor, and the fan blade is made of PA66 nylon, with the protection level up to IP66. Single-phase and three-phase are universal by changing the connecting of capacitor in terminal box. It has wide range of voltage and dual frequency. This international used design can meet the electrical system requirements of many countries in the world.



Model	A	B	C	D	E	E1	F	F1	G	$\alpha$
EFC-E-63E	210	14	95	121	4,3	7	105	105	116,5	45°C
EFC-E-71E	220	7	95	136	5,5	8	105	105	124,5	45°C
EFC-E-80E	230	14	94	154	5,5	8	105	105	133,0	45°C
EFC-E-90E	260	16	104	174	5,5	8	105	105	143,0	45°C
EFC-E-100E	290	18	104	192	5,5	8	105	105	152,0	45°C
EFC-E-112E	300	16	104	216	5,5	8	105	105	164,0	45°C
EFC-E-132E	350	23	125	255	5,5	8	105	105	183,5	45°C
EFC-E-160E	430	25	151	307	6,6	9	105	105	210,0	90°C
EFC-E-180E	373	40	151	357	7,0	12	105	105	210,0	90°C
EFC-E-200E	388	40	151	396	7,0	12	105	105	210,0	90°C
EFC-E-225E	410	35	195	456	9,0	15	105	105	248,0	90°C
EFC-E-250E	432	42	195	504	9,0	15	105	105	248,0	90°C



# Series EFC-E (extra special forced cooling)

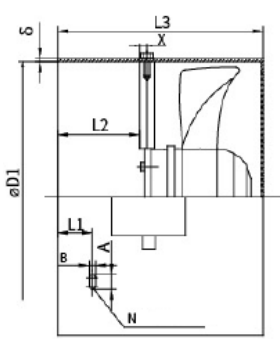
Model	Connection Model $\Delta$	50 Hz				60 Hz			
		U (V)	$\int$ (A,max)	P (W,max)	n (min-1,max)	U (V)	x (A,max)	P (W,max)	n (min-1,max)
EFC-E-63-2	1,5 $\mu$ F 1- $\perp$	220-277	0.105	25	2950	220-277	0.105	25	3550
	3~	200-303	0.14	25	2950	220-332	0.11	22	3550
	3-Y $\Delta$	346-525	0.08	25	2950	380-575	0.065	22	3550
EFC-E-71-2	1,5 $\mu$ F 1- $\perp$	220-277	0.105	25	2950	220-277	0.12	30	3500
	3~	200-303	0.14	30	2950	220-332	0.11	28	3550
	3-Y $\Delta$	346-525	0.08	30	2950	380-575	0.065	28	3550
EFC-E-80-2	1,5 $\mu$ F 1- $\perp$	220-277	0.12	28	2950	220-277	0.14	35	3450
	3~	200-303	0.14	30	2950	220-332	0.12	33	3550
	3-Y $\Delta$	346-525	0.08	30	2950	380-575	0.07	33	3550
EFC-E-90-2	3,0 $\mu$ F 1- $\perp$	220-277	0.30	55	2950	220-277	0.22	55	3550
	3~	200-303	0.40	75	2950	220-332	0.31	62	3550
	3-Y $\Delta$	346-525	0.23	75	2950	380-575	0.18	62	3550
EFC-E-100-2	3,0 $\mu$ F 1- $\perp$	220-277	0.30	58	2950	220-277	0.24	60	3550
	3~	200-303	0.40	78	2950	220-332	0.30	66	3550
	3-Y $\Delta$	346-525	0.23	78	2950	380-575	0.175	66	3550
EFC-E-112-2	3,0 $\mu$ F 1- $\perp$	220-277	0.29	60	2950	220-277	0.28	72	3460
	3~	200-303	0.40	80	2950	220-332	0.30	78	3500
	3-Y $\Delta$	346-525	0.23	80	2950	380-575	0.175	78	3500
EFC-E-132-2	6,0 $\mu$ F 1- $\perp$	220-277	0.38	105	2950	220-277	0.56	155	3450
	3~	200-303	0.40	90	2950	220-332	0.35	115	3500
	3-Y $\Delta$	346-525	0.24	90	2950	380-575	0.21	115	3500
EFC-E-160-2	6,0 $\mu$ F 1- $\perp$	220-277	0.69	165	2800	220-277	-	-	-
	3~	200-303	0.40	140	2800	220-332	0.60	230	3300
	3-Y $\Delta$	346-525	0.23	140	2800	380-575	0.36	230	3300
EFC-E-132-4	5,0 $\mu$ F 1- $\perp$	220-277	0.50	75	1490	220-277	0.35	75	1790
	3~	200-303	0.62	85	1490	220-332	0.57	75	1790
	3-Y $\Delta$	346-525	0.35	85	1490	380-575	0.33	75	1790
EFC-E-160-4	5,0 $\mu$ F 1- $\perp$	220-277	0.50	85	1490	220-277	0.35	85	1770
	3~	200-303	0.62	95	1490	220-332	0.55	90	1790
	3-Y $\Delta$	346-525	0.36	95	1490	380-575	0.32	90	1790
EFC-E-180-2	6,0 $\mu$ F 1- $\perp$	220-277	0.69	165	2800	220-277	-	-	-
	3~	200-303	0.40	140	2800	220-332	0.60	230	3300
	3-Y $\Delta$	346-525	0.23	140	2800	380-575	0.36	230	3300
EFC-E-200-2	6,0 $\mu$ F 1- $\perp$	220-277	0.69	165	2800	220-277	-	-	-
	3~	200-303	0.40	140	2800	220-332	0.60	230	3300
	3-Y	346-525	0.23	140	2800	380-575	0.36	230	3300
EFC-E-225-4	3~	200-303	0.47	110	1460	220-332	0.51	170	1730
	3-Y	346-525	0.27	110	1460	380-575	0.30	170	1730
EFC-E-250-4	3~	200-303	0.47	110	1460	220-332	0.51	170	1730
	3-Y	346-525	0.27	110	1460	380-575	0.30	170	1730



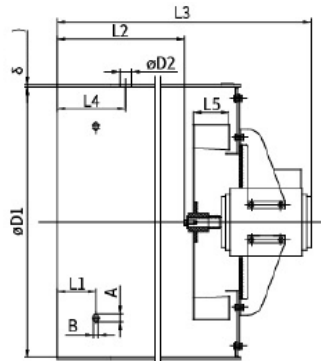
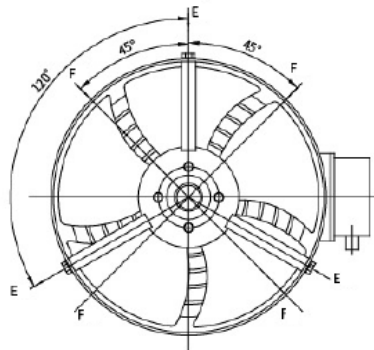
# Series EFC-F (Special forced cooling)

## Increase Air Volume and Air Pressure Fan / Type F

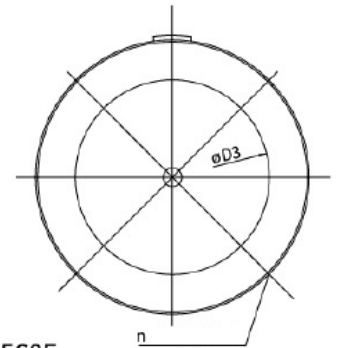
Due to the particularity of occasion and industry, such as steel, paper production, printing and chemical fiber, but the air pressure and air pressure and air volume of original standard fan could't meet the requirements, so we develop the new products.



G-80~250F



G280~560F



# Series EFC-F (Special forced cooling)

## Increase Air Volume and Air Pressure Fan

Model	ΦD1	L1	L2	X	L3	L4	ΦD2	ΦD3	L5	δ	A	B	n
EFC-F-80F	136	13	50	7	137	/	/	/	/	1,2	12	6	3
EFC-F-90F	173	15	55	7	160	/	/	/	/	1,2	12	6	3
EFC-F-100F	195	15	55	10	160	/	/	/	/	1,2	14	7	3
EFC-F-112F	219	17	55	10	185	/	/	/	/	1,2	14	7	3
EFC-F-132F	256	17	60	10	190	/	/	/	/	1,2	14	7	3
EFC-F-160F	311	20	92	10	240	/	/	/	/	1,5	14	7	4
EFC-F-180F	352	35	118	10	265	/	/	/	/	1,5	14	7	4
EFC-F-200F	393	40	130	10	290	/	/	/	/	1,5	17	9	4
EFC-F-225F	443	45	141	12	315	/	/	/	/	2,0	17	9	4
EFC-F-250F	482	55	158	12	330	/	/	/	/	2,0	17	9	4
EFC-F-280F	546	65	167	/	470	114	30	430	82	2,0	25	11	4
EFC-F-315F	614	75	175	/	510	150	30	470	89	2,5	25	11	4
EFC-F-355F	694	82	208	/	545	177	30	500	94	2,5	25	13	4
EFC-F-400F	782	45	425	/	810	105	30	500	129	3,0	34	14	4
EFC-F-450F	882	50	425	/	830	110	30	600	116	4,0	34	14	4
EFC-F-500F	980	50	440	/	840	108	30	620	121	4,0	34	14	4
EFC-F-560F	1092	30	330	/	760	124	30	630	121	5,0	34	14	4

Model	Frame size	Voltage V	Frequency Hz	Power W	Current A	Speed rpm	Air flow m³/h	Air pressure Pa	Noise dB (A)	IP Protection
EFC-F-80F	72-15	380	50	55	0,18	2650	200	60	65	55
EFC-F-90F	92-24	380	50	70	0,28	2800	250	100	67	55
EFC-F-100F	92-24	380	50	70	0,28	2600	300	160	69	55
EFC-F-112F	92-32	380	50	75	0,30	2650	360	190	71	55
EFC-F-132F	92-32	380	50	150	0,30	2200	640	220	74	55
EFC-F-160F	92-42	380	50	80	0,35	1400	960	40	65	55
EFC-F-180F	92-42	380	50	110	0,35	1250	1200	55	69	55
EFC-F-200F	102-48	380	50	145	0,40	1300	1800	65	70	55
EFC-F-225F	102-55	380	50	210	0,60	1320	2750	82	76	55
EFC-F-250F	102-60	380	50	260	0,70	1300	3300	85	77	55
EFC-F-280F	0,75-4	380	50	750	2,05	1400	2800	570	85	55
EFC-F-315F	1,1-4	380	50	1300	2,85	1400	3200	750	85	55
EFC-F-355F	1,5-4	380	50	1700	3,68	1400	3800	850	90	55
EFC-F-400F	2,2-4	380	50	1800	5,09	1420	4500	900	90	55
EFC-F-450F	3-4	380	50	3300	6,73	1420	5600	1250	95	55
EFC-F-500F	4-4	380	50	3500	8,80	1440	6400	1400	95	55
EFC-F-560F	5,5-4	380	50	4300	11,80	1440	7500	1550	100	55

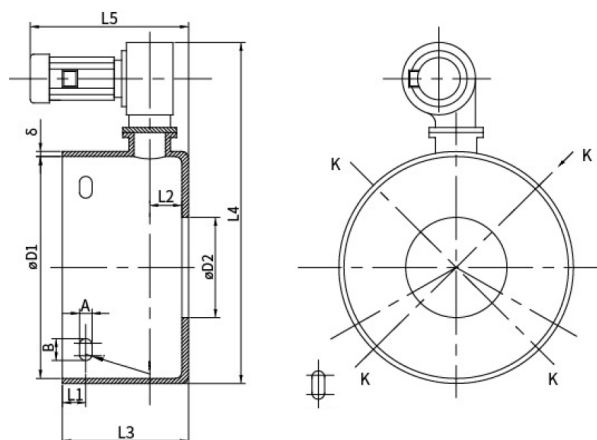




# Series EFC-L

## Backpack Blower

Due to the particularity of occasion and industry, such as steel, paper production, printing and chemical fiber, but the air pressure and air pressure and air volume of original standard fan couldn't meet the requirements, so we develop the new products.



Model	ΦD1	ΦD2	L1	L2	L3	L4	L5	δ	A	B	n
EFC-L-132L	258	38	17	55	150	510	238	1,5	7	14	3
EFC-L-160L	314	42	20	60	170	605	280	2,0	7	14	4
EFC-L-180L	352	48	35	60	180	640	280	2,0	7	14	4
EFC-L-200L	393	55	40	70	220	735	310	2,0	9	17	4
EFC-L-225L	443	55/60	45	70	240	785	310	2,0	9	17	4
EFC-L-250L	482	60/65	55	80	270	820	310	2,0	9	17	4
EFC-L-280L	546	65/75	65	80	290	955	366	3,0	11	25	4
EFC-L-315L	614	65/80	75	80	360	1085	465	3,0	11	25	4
EFC-L-355L	694	75/95	82	-	380	1190	533	3,0	13	25	4
EFC-L-400L	865	-	200	-	670	1385	563	4,0	13	25	4
EFC-L-450L	982	-	60	-	530	1555	605	4,0	13	25	4

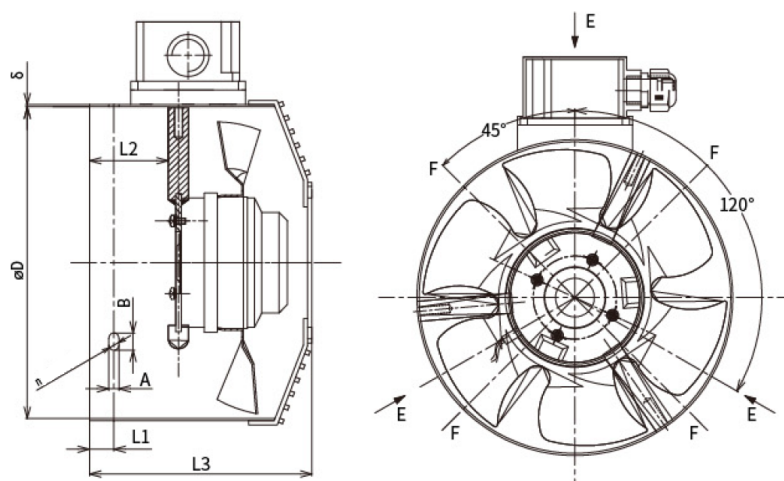
Model	Frame size	Voltage V	Frequency Hz	Power W	Speed rpm	Air flow m³/h	Air pressure Pa	Noise dB (A)
EFC-L-132L	L-04	380	50	0,06	2800	220	350	60
EFC-L-160L	L-05	380	50	0,18	2800	360	550	68
EFC-L-180L	L-05	380	50	0,18	2800	360	550	68
EFC-L-200L	L-06	380	50	0,37	2800	790	760	73
EFC-L-225L	L-06	380	50	0,37	2800	790	760	73
EFC-L-250L	L-06	380	50	0,37	2800	790	760	73
EFC-L-280L	L-06	380	50	1,1	2840	1600	1300	78
EFC-L-315L	L-07	380	50	2,2	2840	2300	1400	83
EFC-L-355L	L-08	380	50	3,0	2860	3010	1710	85
EFC-L-400L	L-09	380	50	4,0	2880	4000	1960	86
EFC-L-450L	L-11	380	50	5,5	2900	5200	2150	88



# Eco-Friendly Fan G-80-315

The parts of the fan comply with ROHS regulation.

And it can operate effectively when installed against the wall.

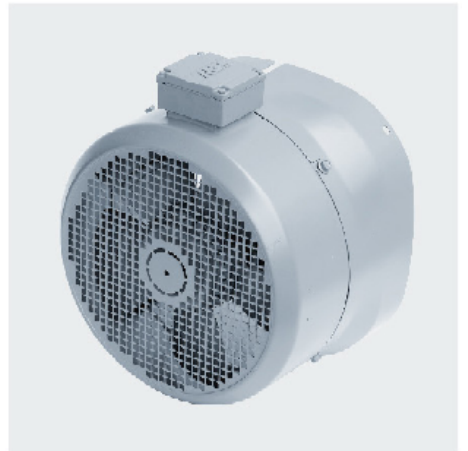


Model	ΦD1	L1	L2	X	L3	δ	A	B	n
EFC-H-80H	155	15	50	10	155	1,5	6	10	3
EFC-H-90H	175	15	55	10	162	1,5	6	10	3
EFC-H-100H	193	15	55	10	155	1,5	7	12	3
EFC-H-112H	217	17	55	10	155	1,5	7	12	3
EFC-H-132H	258	17	60	10	180	1,5	7	12	3
EFC-H-160H	314	20	92	10	225	1,5	7	12	4
EFC-H-180H	352	35	118	10	250	1,5	7	12	4
EFC-H-200H	393	40	130	10	260	1,5	9	15	4
EFC-H-225H	443	45	141	15	300	2,0	9	15	4
EFC-H-250H	482	55	158	15	320	2,0	9	15	4
EFC-H-280H	546	65	167	15	335	2,0	11	20	4
EFC-H-315H	614	75	185	30	390	2,0	11	25	4

Model	Frame size	Voltage V	Frequency Hz	Power W	Current A	Speed rpm	Air flow m³/h	Air pressure Pa	Noise dB (A)	IP Protection
EFC-H-80H	72-18	380	50	55	0,15	2850	58	60	62	54/55
EFC-H-90H	72-18	380	50	55	0,15	2650	91	80	65	54/55
EFC-H-100H	92-15	380	50	65	0,15	2750	142	80	67	54/55
EFC-H-112H	92-15	380	50	80	0,15	2550	229	80	67	54/55
EFC-H-132H	92-24	380	50	55	0,23	1430	337	35	69	54/55
EFC-H-160H	92-32	380	50	60	0,28	1400	609	40	72	54/55
EFC-H-180H	92-32	380	50	85	0,28	1350	686	55	72	54/55
EFC-H-200H	92-32	380	50	110	0,28	1200	1679	65	72	54/55
EFC-H-225H	102-48	380	50	170	0,40	1450	1785	70	74	54/55
EFC-H-250H	102-55	380	50	200	0,60	1400	1813	80	75	54/55
EFC-H-280H	102-55	380	50	270	0,60	1350	2415	85	78	54/55
EFC-H-315H	138-50	380	50	520	1,05	1300	2820	110	81	54/55



# Special Customized Fan / Series EFC-CD





## Address

VYBO ELECTRIC a. s. | tel: +421 944 105 361  
Radlinského 18 | e-mail: mv@vyboelectric.eu  
052 01 Spišská Nová Ves  
Slovenská republika

[www.vyboelectric.com](http://www.vyboelectric.com)



SOLUTIONS FOR INDUSTRY

BUREAU VERITAS  
Certification



**VYBO Electric a.s.**  
Radlinského 18, 052 01 Spišská Nová Ves  
Slovak Republic

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

**ISO 14001: 2015**

Scope of certification

**MANUFACTURE AND SALE OF ELECTRIC MOTORS. SALES AND DEVELOPMENT OF VARIABLE FREQUENCY DRIVES.**

Original cycle start date: 18.05.2022  
Expiry date of previous cycle: N/A  
Certification Audit date: 31.03.2022  
Certification cycle start date: 18.05.2022

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 17.05.2025

Certificate No. SK-U22 055E Version: 1 Issue date: 18.05.2022

Certification body address: 5<sup>th</sup> Floor, 66 Prescot Street, London E1 8HQ, United Kingdom  
Local office: Plynárskeho 7/B, BRATISLAVA 821 09, Slovak Republic



Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation. To check this certificate validity please call: +421 2 5341 4165

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Bureau Veritas Certification

**Certificate**

Awarded to

**VYBO Electric a.s.**  
Radlinského 18, 052 01 Spišská Nová Ves  
Slovak Republic

BUREAU VERITAS CERTIFICATION (Z) s.r.o. certifies that the Management System of the above organisation has been assessed and found to be in accordance with the requirements of the management system standard detailed below

Standard

**ISO 45001:2018**

Scope of supply

**MANUFACTURE AND SALE OF ELECTRIC MOTORS. SALES AND DEVELOPMENT OF VARIABLE FREQUENCY DRIVES.**

Original Approval Date: 18-05-2022  
Expiry date of previous cycle: N/A  
Certification Cycle Start Date: 18-05-2022  
Certification Cycle End Date: 17-05-2025  
Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until: 17-05-2025

To check this certificate validity please call: +420 210 098 215

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.

Version 1 Issue Date: 18-05-2022  
Certificate Number: CZF - 2200117

ISSUING OFFICE ADDRESS: BUREAU VERITAS CERTIFICATION CZ s.r.o., Olšavského 1, 143 02 Praha 4, Czech Republic

11

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFICAT



**CERTIFICATE**

**TÜV SÜD Slovakia s.r.o.**  
Certification Body for Management Systems  
Accredited by SNAS  
Certificate on accreditation No. Q-011  
certifies that



**VYBO Electric a.s.**  
Radlinského 18  
SK – 052 01 Spišská Nová Ves  
IČO: 45 537 143

has established and applies  
a Quality Management System for

**Manufacture and sale of electric motors.  
Sales and development of variable frequency drives.**

An audit was performed, Report No. 2264/40/22/Q/AS/C  
Proof has been furnished that the requirements  
according to

**STN EN ISO 9001:2016**

are fulfilled. The certificate is valid from 2022-04-14 until 2025-04-13  
Certificate Registration No. Q 2264-1

Bratislava, 2022-04-14

TÜV SÜD Slovakia s.r.o.  
Certification Body for Management Systems  
Member of Group TÜV SÜD  
Jaskóva 6, 821 03 Bratislava

F-Q-019/26

Certificate SK22/3701

The management system of

**VYBO Electric a.s.**  
Radlinského 18  
052 01 Spišská Nová Ves, Slovakia

has been assessed and certified as meeting the requirements of

**EN ISO 50001:2018**

For the following activities

**Production & sales of electric motors.  
Sales & development of variable frequency drives.**

Further clarifications regarding the scope of this certificate and the applicability of EN ISO 50001:2018 requirements may be obtained by consulting the organisation.

This certificate is valid from 7 April 2022 until 6 April 2025  
and remains valid subject to satisfactory surveillance audits.  
Recertification audit due a minimum of 60 days  
before the expiration date.  
Issue 1. Certified with SGS since 7 April 2022

Authorised by

Ing. Róbert Bodnár  
Director

SGS Slovakia spol. s r. o.  
Kýšucká 14, 040 11 Košice, Slovakia  
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