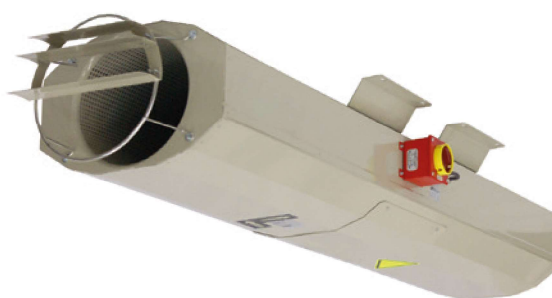


**PRODUCT CONFIGURATOR
AT WWW.MERCOR.COM.PL**



Applus⁺

- ▶ Certificate of constancy of performance 0370-CPR-1935 for F400 and 0370-CPR-1933 for F300.
- ▶ Functional properties according to EN 12101-3:2002+AC:2005.
- ▶ Available in unidirectional or reversible version.

5.1.

use

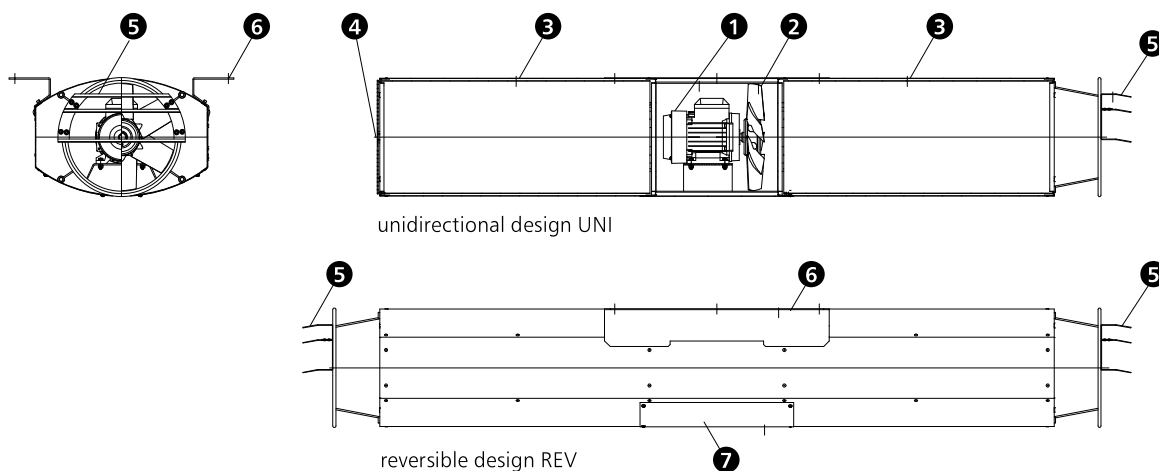
mcr Bora jet fans are designed for fire or comfort ventilation systems. They are intended for removing heat, smoke and combustion gases generated during fire. Due to their design the air or smoke is directed in a specific direction and moves with certain forced velocity.

mcr Bora jet fans may be also used in comfort ventilation systems. These devices are designed for indoor use. Most often used in civic buildings, shopping malls, boarding houses and garages.

The mcr Bora fans can feature two-speed motors and combine comfort ventilation and smoke exhaust functions, e.g. both for ventilation and smoke exhaust in garages or other indoor areas.

5.2.

design



1. electric motor, fire resistant at the specific temperature class
2. axial impeller
3. silencer
4. protective grill (for UNI version)
5. deflector (for UNI or REV version)
6. installation foot
7. revision cover

The fan's housing is made of hot-galvanised steel sheet. Also available with powder coating. The motor is located and supported by the motor base inside the casing. The impeller is set directly on the motor's pirot. The impeller's blades have profile to ensure the required flow characteristics. Depending on the use, the blades can be unidirectional or reversible.

The fan may be equipped with a three phase, two-speed 400 V / 50 Hz in Dahlander arrangement (3000, 1500 rpm), set on a support fixed to fan's housing, without serial assembled thermal protection. The motor is rated H for insulation for continuous (S1) and emergency operation (S2). The mechanical protection class is IP 55. Maximum temperatures of the air being transferred is: for S1 from -20°C to +40°C, for S2: 300°C/2h, 400°C/2h.

The mcr Bora is available with the following housings:

- L** – octagonal housing, galvanised steel
- LS** – octagonal short housing, galvanised steel
- O** – octagonal coated housing
- C** – round housing, galvanised steel

mcr Bora can operate in the following modes:

- unidirectional – **UNI**
- reversible – **REV**

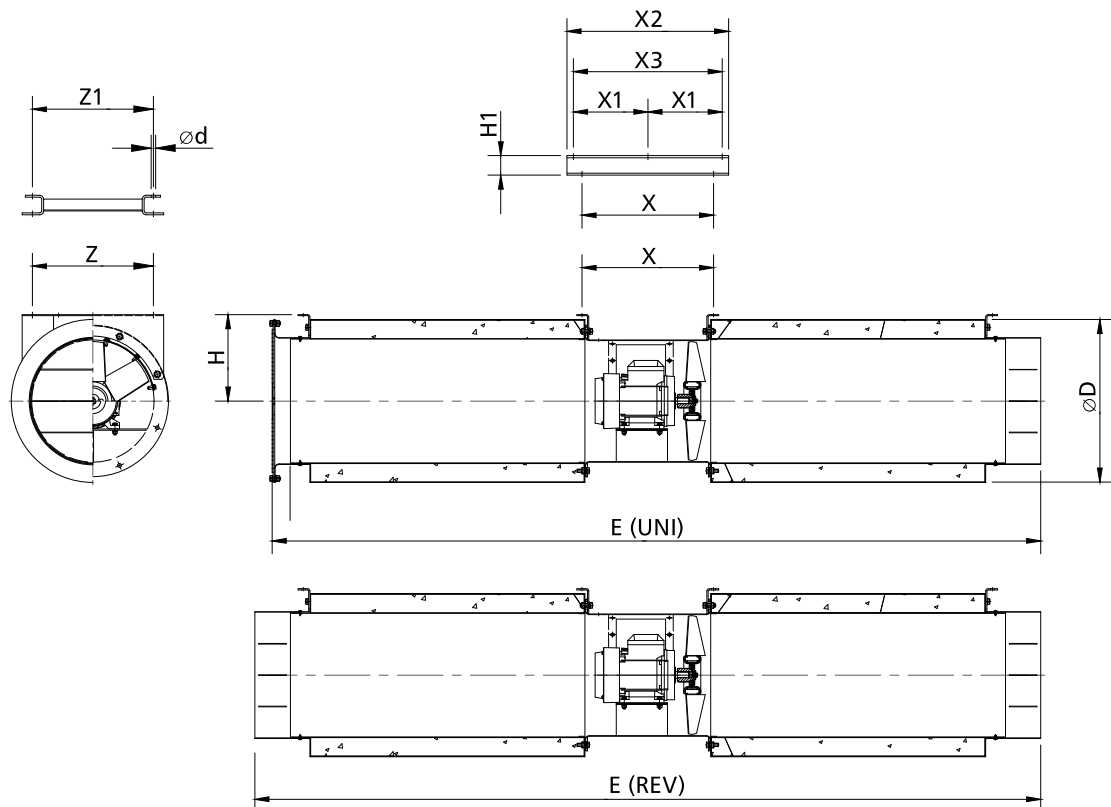
On mcr Bora-L, mcr Bora-LS and mcr Bora-O models a service switch is serial assembled and on mcr Bora-C the service switch is available on request.

A deflector for increasing the air venting range is installed on the impeller side. With reversible versions, the deflectors are installed on both sides of the fan.

5.3. dimensions

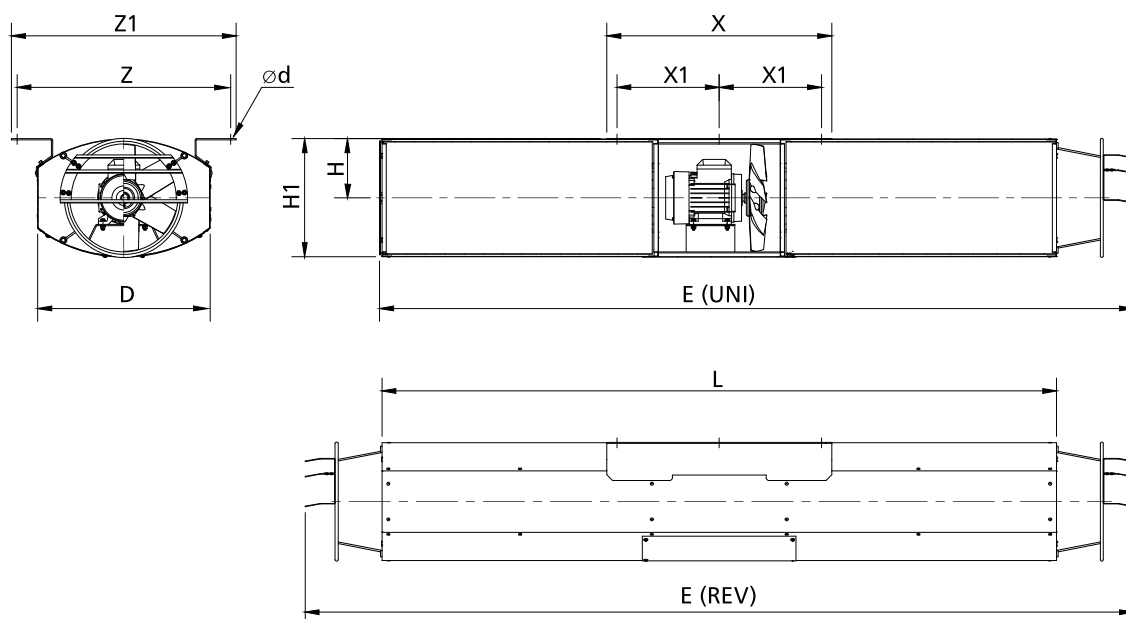
Depending on the housing version the jet fan mcr Bora is available in different housing sizes from Ø 290 to Ø 450 (up to Ø 800 on request).

mcr Bora-C fan



fan	ØD [mm]	Ød [mm]	E [mm]	H [mm]	H1 [mm]	X [mm]	X1 [mm]	X2 [mm]	X3 [mm]	Z [mm]	Z1 [mm]
mcr Bora-C-UNI-31-2/4T	415	10	1956	220	-	345	-	-	-	275	-
mcr Bora-C-UNI-35-2/4T	460	12	1960	250	-	346	-	-	-	300	-
mcr Bora-C-UNI-38-2/4T-1.5	415	12	2570	225	-	-	-	600	530	-	517
mcr Bora-C-UNI-40-2/4T-1.5	510	12	2485	280	-	376	-	-	-	400	-
mcr Bora-C-UNI-45-2/4T-2	630	12	2500	355	-	396	-	-	-	440	-
mcr Bora-C-UNI-45-2/4T-3	710	12	2895	410	80	514	320	700	-	380	370
mcr Bora-C-REV-31-2/4T	415	10	2000	220	-	345	-	-	-	275	-
mcr Bora-C-REV-35-2/4T	460	12	2005	250	-	346	-	-	-	300	-
mcr Bora-C-REV-38-2/4T-2	415	12	2620	225	-	-	-	600	530	-	517
mcr Bora-C-REV-40-2/4T-2	510	12	2540	280	-	376	-	-	-	400	-
mcr Bora-C-REV-45-2/4T-2	630	12	2554	355	-	396	-	-	-	440	-
mcr Bora-C-REV-45-2/4T-3	710	12	2950	410	80	514	320	700	-	380	370

mcr Bora-O, mcr Bora-L, mcr Bora-LS fans



fan	D [mm]	Ød [mm]	E [mm]	L [mm]	H [mm]	H1 [mm]	X [mm]	X1 [mm]	Z [mm]	Z1 [mm]
mcr Bora-O-UNI-29	460	12x26	2012	1800	158	316	600	273	570	600
mcr Bora-O-UNI-35	520	12x26	2012	1800	193	358	600	273	614	644
mcr Bora-L-UNI-29	460	12x26	2012	1800	158	316	600	273	570	600
mcr Bora-L-UNI-35	520	12x26	2012	1800	193	358	600	273	614	644
mcr Bora-LS-UNI-29	460	12x26	1410	1200	158	316	600	273	570	600
mcr Bora-LS-UNI-35	520	12x26	1410	1200	193	358	600	273	614	644
mcr Bora-O-REV-29	460	12x26	2210	1800	158	316	600	273	570	600
mcr Bora-O-REV-35	520	12x26	2210	1800	193	358	600	273	614	644
mcr Bora-L-REV-29	460	12x26	2210	1800	158	316	600	273	570	600
mcr Bora-L-REV-35	520	12x26	2210	1800	193	358	600	273	614	644
mcr Bora-LS-REV-29	460	12x26	1610	1200	158	316	600	273	570	600
mcr Bora-LS-REV-35	520	12x26	1610	1200	193	358	600	273	614	644

5.4. technical parameters

5.4.1. fire resistance

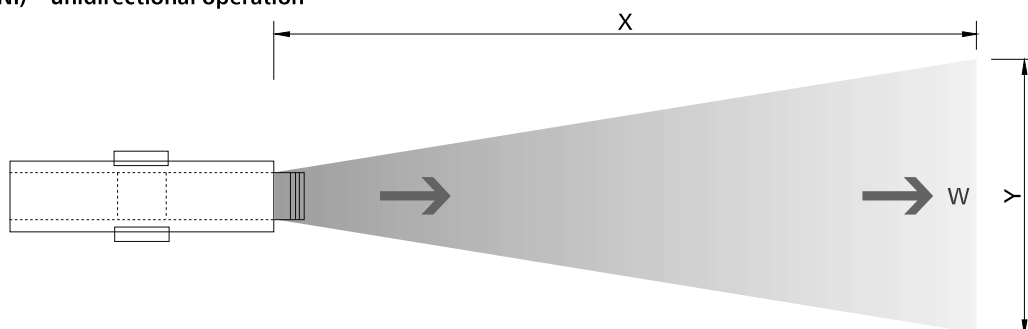
In accordance with EN 12101-3 mcr Bora is certified for the following fire resistance:

- class **F400** – fire resistance 400°C/120 min.
- class **F300** – fire resistance 300°C/60 min. (fire resistance during test 300°C/120 min.)

Also available in version BO, i.e. without fire resistance.

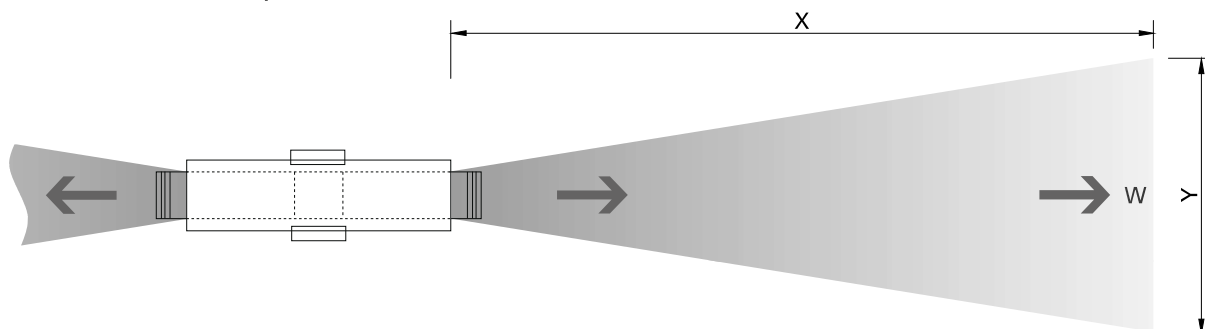
5.4.2 technical and flow parameters

mcr Bora (UNI) – unidirectional operation



fan	nominal directional speed n [rpm]	rated current I [A]	power (electric) P [kW]	thrust [N]	capacity Q [m³/s]	speed at outlet [m/s]	range at the speed w = 1.0 m/s x/y [m]	fan weight [kg]	total sound power level L _w [dB A]	total sound pressure level [dB A] 3m
mcr Bora-L-UNI-29-2/4T	2860/1430	1.5/0.55	0.55/0.15	21/5.3	1.11/0.55	16.8/8.40	19.49/8.29	69	65/50	47/32
mcr Bora-L-UNI-35-2/4T	2875/1430	2.1/0.80	0.85/0.20	36/9	1.76/0.88	17.8/8.85	24.92/10.59	70	80/65	62/47
mcr Bora-LS-UNI-29-2/4T	2860/1430	1.5/0.55	0.55/0.15	21/5.3	1.11/0.55	16.8/8.40	19.49/8.29	55	67/52	49/34
mcr Bora-LS-UNI-35-2/4T	2875/1430	2.1/0.80	0.85/0.20	36/9	1.76/0.88	17.8/8.85	24.92/10.59	56	82/67	64/49
mcr Bora-O-UNI-29-2/4T	2860/1430	1.5/0.55	0.55/0.15	21/5.3	1.11/0.55	16.8/8.40	19.49/8.29	69	65/50	47/32
mcr Bora-O-UNI-35-2/4T	2875/1430	2.1/0.80	0.85/0.20	36/9	1.76/0.88	17.8/8.85	24.92/10.59	70	80/65	62/47
mcr Bora-C-UNI-31-2/4T	2860/1430	1.5/0.55	0.55/0.15	21/5.3	1.18/0.59	15.6/7.80	19.34/8.22	65	79/64	61/46
mcr Bora-C-UNI-35-2/4T	2875/1430	2.1/0.80	0.85/0.20	36/9	1.76/0.88	17.8/8.85	24.92/10.59	70	80/65	62/47
mcr Bora-C-UNI-38-2/4T-1.5	2900/1450	2.9/1.10	1.10/0.25	57/14.3	2.34/1.17	20.7/10.35	31.46/13.37	89	75/60	57/42
mcr Bora-C-UNI-40-2/4T-1.5	2900/1450	2.9/1.10	1.10/0.25	60/15	2.56/1.28	20.4/10.2	32.64/13.88	98	81/66	63/48
mcr Bora-C-UNI-45-2/4T-2	2930/1450	5.7/1.80	2.20/0.60	92/22.5	3.66/1.81	22.1/10.94	39.78/16.91	133	86/71	68/53
mcr Bora-C-UNI-45-2/4T-3	2930/1450	5.7/1.80	2.20/0.60	92/22.5	3.66/1.81	22.1/10.94	39.78/16.91	133	86/71	68/53

mcr Bora (REV) – reversible operation



fan	nominal directional speed n [rpm]	rated current I [A]	power (electric) P [kW]	thrust [N]	capacity Q [m³/s]	speed at outlet [m/s]	range at the speed w = 1.0 m/s x/y [m]	fan weight [kg]	total sound power level L _w [dB A]	total sound pressure level [dB A] 3m
mcr Bora-L-REV-29-2/4T	2860/1430	1.5/0.55	0.55/0.15	15/4	1.94/0.47	14.3/7.15	16.59/7.05	67	66/51	48/33
mcr Bora-L-REV-35-2/4T	2875/1430	2.1/0.80	0.85/0.20	31/8	1.65/0.82	16.7/8.31	23.38/9.94	70	79/64	61/46
mcr Bora-LS-REV-29-2/4T	2860/1430	1.5/0.55	0.55/0.15	15/4	1.94/0.47	14.3/7.15	16.59/7.05	55	68/53	50/35
mcr Bora-LS-REV-35-2/4T	2875/1430	2.1/0.80	0.85/0.20	31/8	1.65/0.82	16.7/8.31	23.38/9.94	56	81/66	63/48
mcr Bora-O-REV-29-2/4T	2860/1430	1.5/0.55	0.55/0.15	15/4	1.94/0.47	14.3/7.15	16.59/7.05	67	66/51	48/33
mcr Bora-O-REV-35-2/4T	2875/1430	2.1/0.80	0.85/0.20	31/8	1.65/0.82	16.7/8.31	23.38/9.94	70	79/64	61/46
mcr Bora-C-REV-31-2/4T	2860/1430	1.5/0.55	0.55/0.15	17/4.3	1.06/0.53	14.1/7.05	17.48/7.43	63	78/63	60/45
mcr Bora-C-REV-35-2/4T	2875/1430	2.1/0.80	0.85/0.20	31/8	1.65/0.82	16.7/8.31	23.38/9.94	70	79/64	61/46
mcr Bora-C-REV-38-2/4T-1.5	2940/1460	4.4/1.40	1.50/0.37	54/13.3	2.27/1.13	20.1/9.98	30.55/12.99	91	77/62	59/44
mcr Bora-C-REV-40-2/4T-1.5	2940/1460	4.4/1.40	1.50/0.37	60/14.8	2.56/1.27	20.4/10.1	32.64/13.88	100	80/65	62.47
mcr Bora-C-REV-45-2/4T-2	2930/1450	5.7/1.80	2.20/0.60	87/21.3	3.55/1.77	21.4/10.59	39.78/16.91	133	85/70	67/52
mcr Bora-C-REV-45-2/4T-3	2930/1450	10/3.20	4.50/1.30	153/37.5	5.47/2.70	25.4/12.57	50.80/21.6	267	88/73	70/55

5.5. accessories

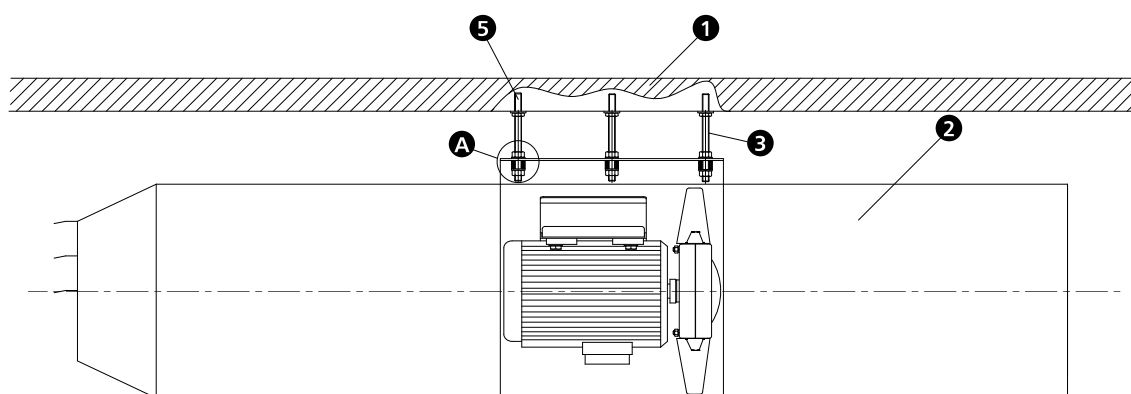
There are no accessories available for mcr Bora jet fans.

All fans have installation supports or frames as standard accessories depending on the fan size and design. Depending on the mode of operation (reversible or unidirectional), the fans are factory equipped with deflectors or protective grills. The mcr Bora-L, mcr Bora-LS and mcr Bora-O models are equipped with service switch on the housing as standard. On mcr Bora-C, the service switch is available on request.

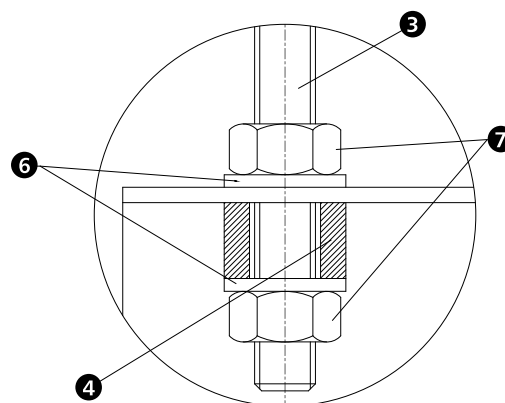
5.6. installation

The mcr Bora smoke exhaust jet fan is intended for use in rooms designed for moving air and fire gases (in the fire zone). The mcr Bora fan is designed for horizontal installation.

5.6.1. sample of fan installation



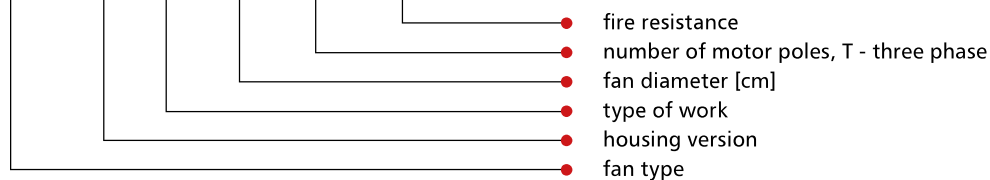
detail A



- 1 - ceiling
- 2 - mcr Bora fan
- 3 - installation sling (not included)
- 4 - shock absorber, e.g. made of rubber (not included)
- 5 - installation anchor (not included)
- 6 - steel washers (not included)
- 7 - fixing bolts (not included)

5.7. designation

mcr Bora / L / REV / 29 / 2/4T / F400

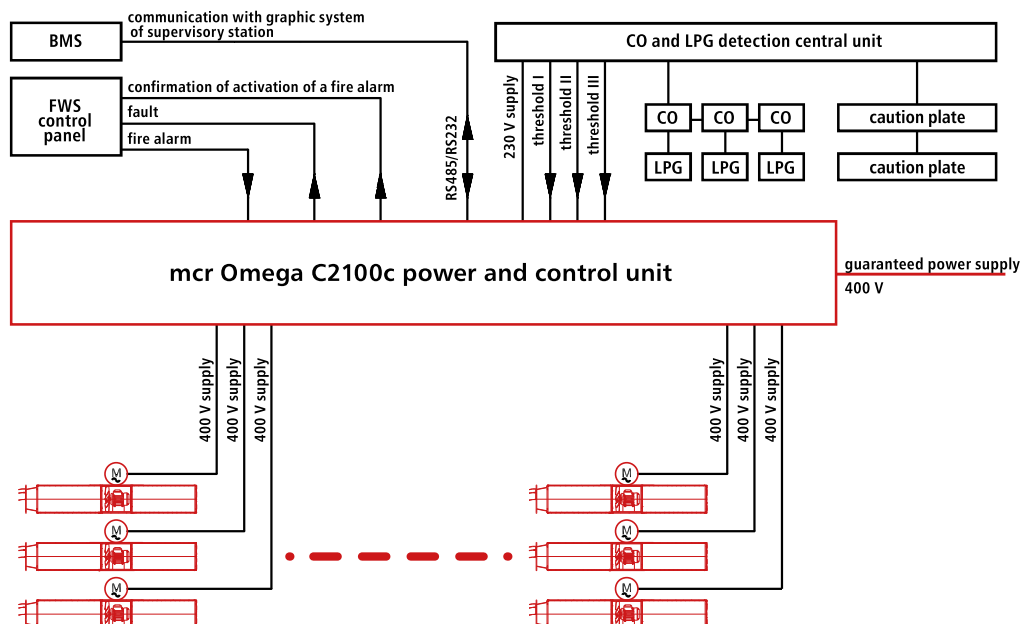


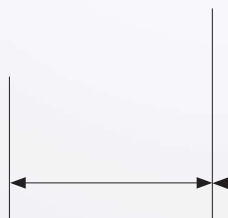
5.8. power supply and control

The detailed information and electrical connection diagrams for specific models of fans are included in the operation and maintenance manuals.

It is recommended to use a dedicated, certified power supply and control unit **mcr Omega C2100c**.

General power supply and control diagram for mcr Bora fans using mcr Omega unit:





MERCOR SA

Grzegorza z Sanoka 2
80-408 Gdańsk
phone: +48 58 341 42 45
merc@merc.com.pl

TRADE OFFICE WARSZAWA

Grzybowska 2 lok. 79
00-131 Warszawa
phone: +48 22 654 26 55
warszawa@merc.com.pl

TRADE OFFICE MIKOŁÓW

Kolejowa 4
43-190 Mikołów
phone: +48 32 328 43 71
mikołow@merc.com.pl

TRADE OFFICE WROCLAW

Wystawowa 1 lok. 201
51-618 Wrocław
phone: +48 71 346 06 41
wroclaw@merc.com.pl

www.mercor.com.pl