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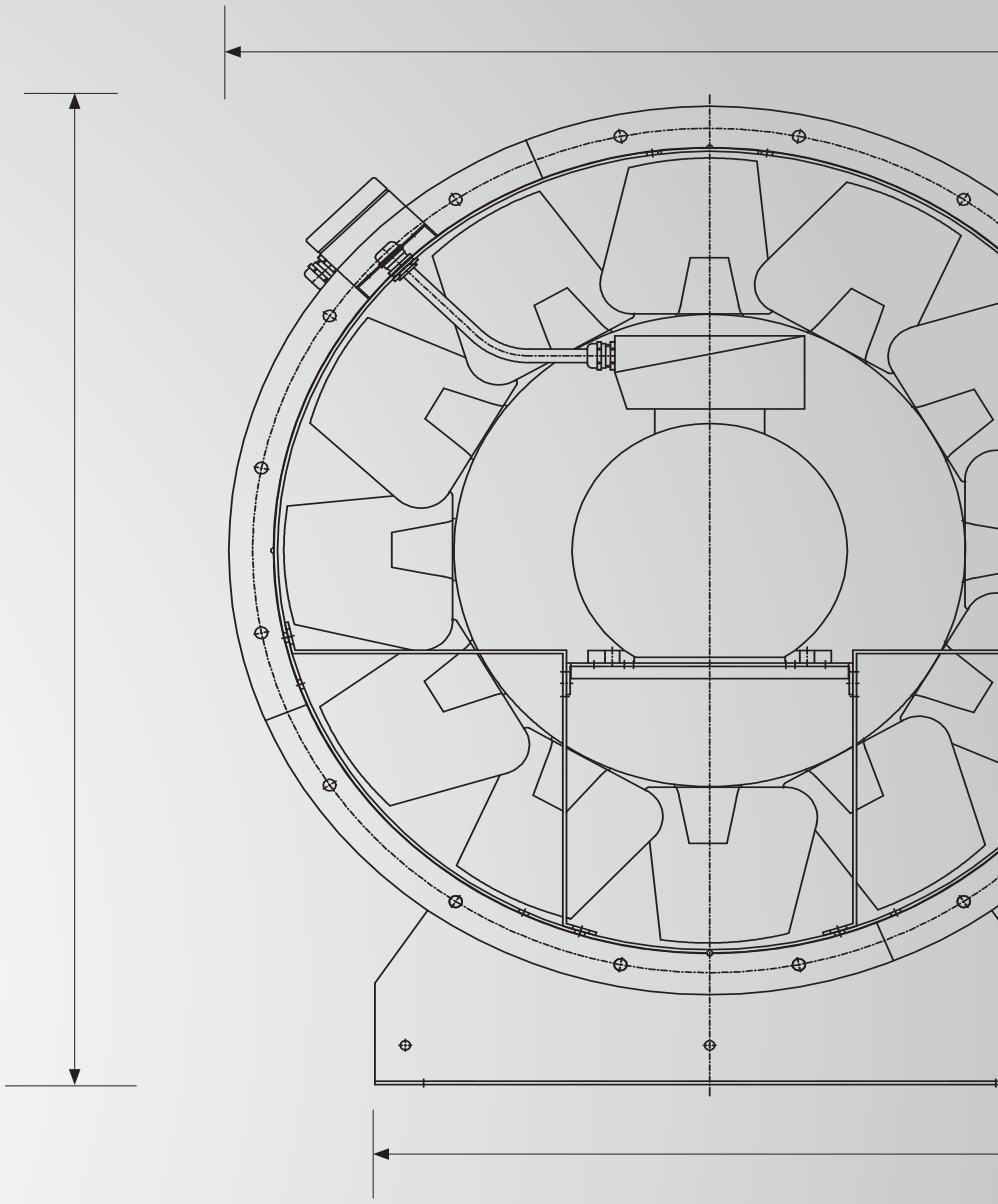

TECHNICAL CATALOGUE

FIRE VENTILATIONS SYSTEMS

FANS

SMOKE EXHAUST / JET / AIR SUPPLY

mercor®

Technical Catalogue 2016

Dear Sir/Madam,

Please accept our Technical Catalogue for fire ventilation systems, which contains detailed information on the use, design, technical and flow specification, methods of installation and auxiliary equipment for fire exhaust, jet and air supply fans.

Every appliance dispatched from Mercor SA factories to a Customer is thoroughly verified in accordance with the highest quality management standards and subject to a range of approval tests. We are proud to provide safety through our operations.

We are looking forward to doing business with you.

The Mercor SA Team

The electronic version of our Technical Catalogue is available at www.mercor.com.pl

mercor®

FIRE VENTILATION SYSTEMS

Fire ventilation systems

Technical Catalogue 2016

Edited by: Mercor - Fire Ventilation Systems Department

Desktop publishing: Bliskie strony

FIRE VENTILATION SYSTEMS

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mercor®

PRODUCT CONFIGURATOR AT WWW.MERCOR.COM.PL

1488-CPD-0209/W

1488-CPR-0526/W

CERTYFIKACJA PRODUKTU

- **Certificate of constancy of performance 1488-CPD-0209/W for F400 and 1488-CPR-0526/W for F600.**
- **Functional properties according to EN 12101-3:2002+AC:2005.**
- **Patent no. 220478 issued by Patent Office of the Republic of Poland.**
- **6 nominal sizes.**
- **Two-speed versions for mixed ventilation systems.**
- **Also available without fire resistance - BO.**

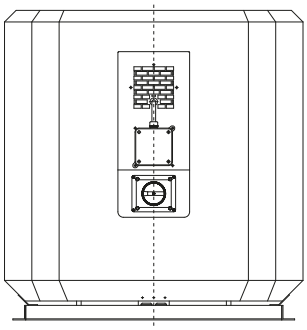
1.1. use

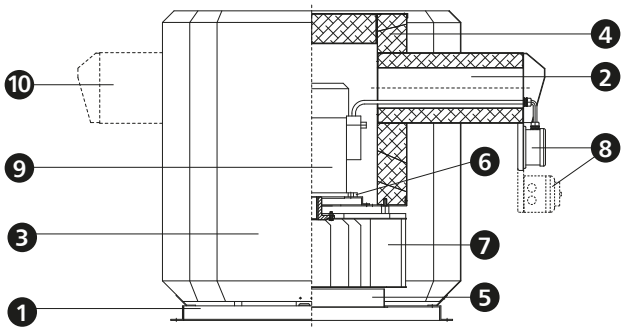
mcr Pasat roof smoke exhaust fans with axial impeller for removing smoke and hot air from rooms on fire and for comfort ventilation. The fans can feature one or two speed motors and combine comfort and smoke exhaust functions, e.g. both for ventilation and smoke exhaust in underground car parks, shopping malls and production halls.

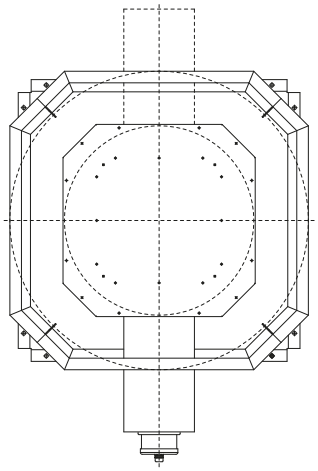
Smoke exhaust fans facilitate evacuation of people and equipment from areas on fire, enable faster and more effective fire fighting, protect the building structure and its furnishing from high temperature, inhibit spreading of fire, fire gases and smoke to adjacent fire zones.

The devices can be used outdoors and in vertical position.

1.2. design







1. fan base
2. cooling duct
3. outer housing
4. motor housing
5. connection pipe
6. motor base
7. radial impeller
8. terminal box/service switch [option]
9. electric motor
10. additional cooling duct (for diameters 630, 710)

Depending on the fan size the fan's housing is made of aluminium sheet or hot-galvanised steel sheet. The fan's design enables draining precipitation water, melting snow or condensed water vapour from inlet air.

The fan may be equipped with a three phase class IE2 or IE3 motor: one-speed [230/400 V (Y) or 400/690 V (D/Y)], or two-speed [400/400 V (Y/YY)] with different rotational speeds (3000, 1500, 1000, 750 rpm) without serial assembled thermal protection. The engine is designed for operation with an inverter.

The axially designed impeller is set directly on the motor shaft neck.

1.3. dimensions

Roof smoke exhaust fans mcr Pasat are available with six nominal diameters of impeller: 315 mm, 355 mm, 400 mm, 500 mm, 630 mm, 710 mm.

Detailed dimensions of fans are given in the descriptions of individual types later in the chapter.

1.4. technical parameters

1.4.1. motor power

Range of motor power depending on the size of fan and rotational speeds of the impeller

motor speed n = 750 [rpm]		motor speed n = 1000 [rpm]		motor speed n = 1500 [rpm]		motor speed n = 3000 [rpm]	
fan	**power range P [kW]**	**fan**	**power range P [kW]**	**fan**	**power range P [kW]**	**fan**	**power range P [kW]**
mcr Pasat 31	0.09-0.25	**mcr Pasat 31**	0.12-0.37	**mcr Pasat 31**	0.37-1.1	**mcr Pasat 31**	1.5-5.5
mcr Pasat 35	0.9-0.37	**mcr Pasat 35**	0.8-0.55	**mcr Pasat 35**	0.55-1.5	**mcr Pasat 35**	3-11
mcr Pasat 40	0.12-0.55	**mcr Pasat 40**	0.25-0.75	**mcr Pasat 40**	1.1-3	**mcr Pasat 40**	4-15
mcr Pasat 50	0.37-1.1	**mcr Pasat 50**	0.75-2.2	**mcr Pasat 50**	3-7.5		
mcr Pasat 63	0.75-5.5	**mcr Pasat 63**	2.2-7.5	**mcr Pasat 63**	7.5-30		
mcr Pasat 71	1.5-7.5	**mcr Pasat 71**	5.5-7.5	**mcr Pasat 71**	15-37		

1.4.2. fire resistance

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

- class **F400** – fire resistance 400°C/120 min.
- class **F600** – fire resistance 600°C/60 min.

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

1.4.3. technical and flow parameters

The working parameters of mcr Pasat fan cover the range from 500 m^3/h to 52000 m^3/h at pressure up to 1950 Pa.

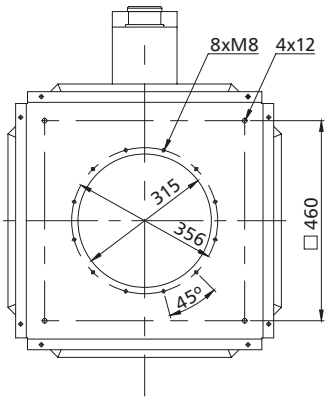
Symbols in tables and specifications:

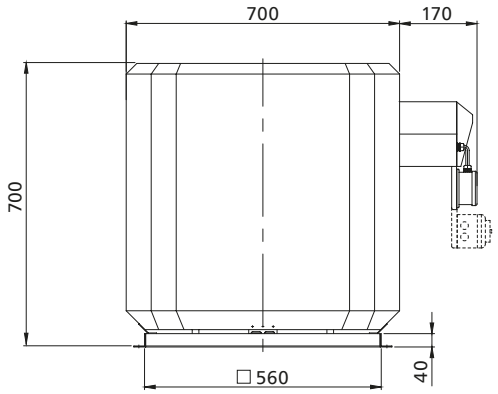
Δp – available pressure [Pa]
Q – efficiency [m^3/h]
nr – specification number
P – rated power [kW]
n – motor speed [rpm]
Un – rated voltage
In – rated current
m1 – approximate F400 fan weight without accessories [kg]
m2 – approximate F600 fan weight without accessories [kg]

The specifications refer to 20°C and air density of 1.2 kg/m^3.

The mcr Pasat fan selection program is available at **www.mercor.com.pl**, in the Architect and Designer Zone.

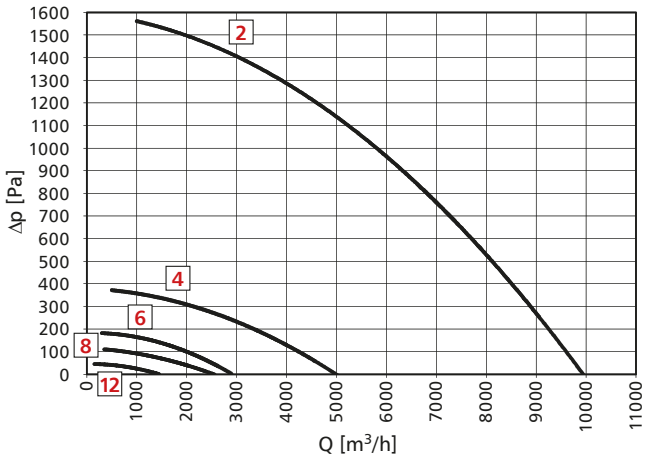
mcr Pasat 31





mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
31/2-4	2	4	3000	400	7.8	71	79
31/4-0.55	4	0.55	1500	400	1.46	54	62
31/6-0.25	6	0.25	1000	400	0.79	53	61
31/8-0.12	8	0.12	750	400	0.51	54	62

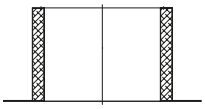
mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
31/2/4-4.5/1.3	2/4	4.5/1.3	3000/1500	400	9.9/1.3	81	89
31/4/6-0.7/0.2	4/6	0.7/0.2	1500/1000	400	2.1/1.05	56	63
31/4/8-0.75/0.12	4/8	0.75/0.12	1500/750	400	2.3/0.9	55	63
31/6/12-0.75/0.15	6/12	0.75/0.15	1000/500	400	2.1/0.8	59	67



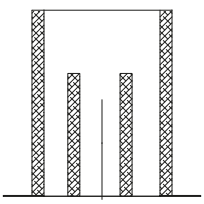
fan									sound power level Lw(A)*
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	[dB A]
mcr Pasat 31/2	61	71	85	90	92	91	86	78	97
mcr Pasat 31/4	45	55	69	74	76	75	70	62	81
mcr Pasat 31/6	37	47	62	67	69	67	63	54	73
mcr Pasat 31/8	32	42	57	62	64	62	58	49	68
mcr Pasat 31/2/4	61	71	85	90	92	91	86	78	97
mcr Pasat 31/4/6	45	55	69	74	76	75	70	62	81
mcr Pasat 31/4/8	45	55	69	74	76	75	70	62	81
mcr Pasat 31/6/12	37	47	62	67	69	67	63	54	73

*Sound power level Lw(A) was established for fan's highest efficiency point.

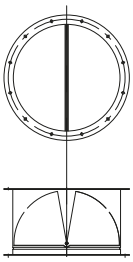
Accessories



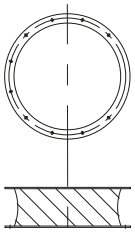
Roof base PD



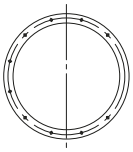
Soundproof roof base PD-T



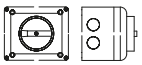
Automatic back draft damper KS-V



Flexible connection KD

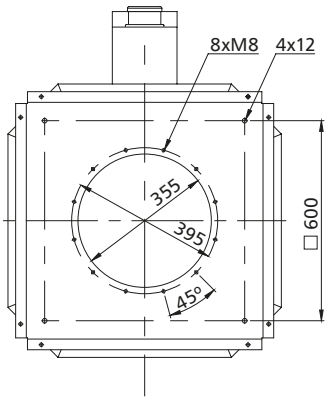


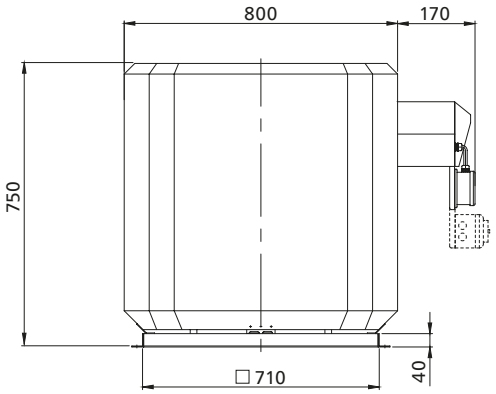
Counter flange PK



Service switch WS

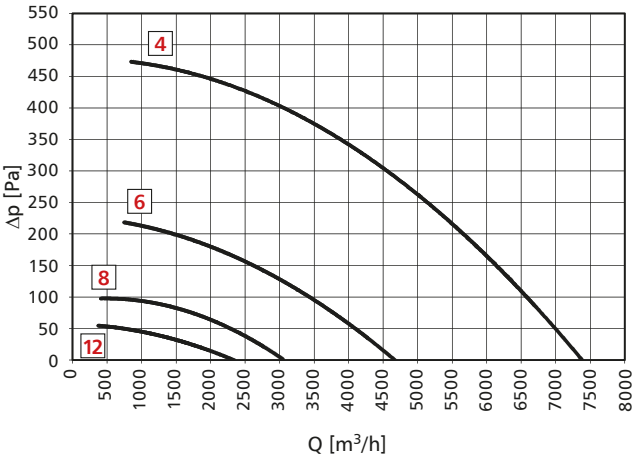
mcr Pasat 35





mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
35/4-1.5	4	1.5	1500	400	3.4	75	83
35/6-0.25	6	0.25	1000	400	0.79	68	76
35/8-0.18	8	0.18	750	400	0.75	69	77

mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
35/4/6-1.4/0.5	4/6	1.4/0.5	1500/1000	400	3.5/1.4	76	84
35/4/8-1.5/0.25	4/8	1.5/0.25	1500/750	400	4.2/1.6	74	82
35/6/12-0.75/0.15	6/12	0.75/0.15	1000/500	400	2.1/0.8	74	82

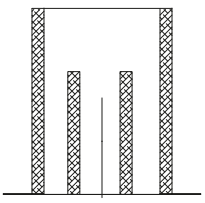


fan									sound power level Lw(A)*
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	[dB A]
mcr Pasat 35/4	50	59	74	79	81	80	75	66	86
mcr Pasat 35/6	41	51	65	70	72	71	66	58	77
mcr Pasat 35/8	32	42	56	61	63	62	57	49	68
mcr Pasat 35/4/6	50	59	74	79	81	80	75	66	86
mcr Pasat 35/4/8	50	59	74	79	81	80	75	66	86
mcr Pasat 35/6/12	41	51	65	70	72	71	66	58	77

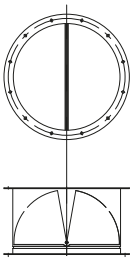
*Sound power level Lw(A) was established for fan's highest efficiency point.

Accessories

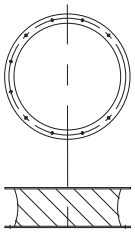
Roof base PD



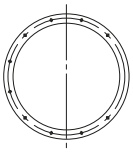
Soundproof roof base PD-T



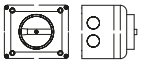
Automatic back draft damper KS-V



Flexible connection KD

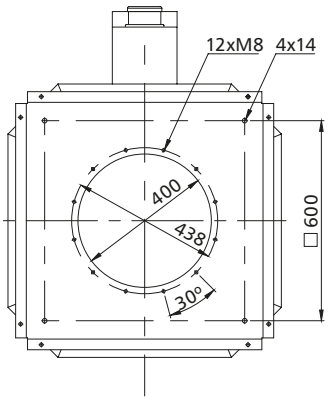


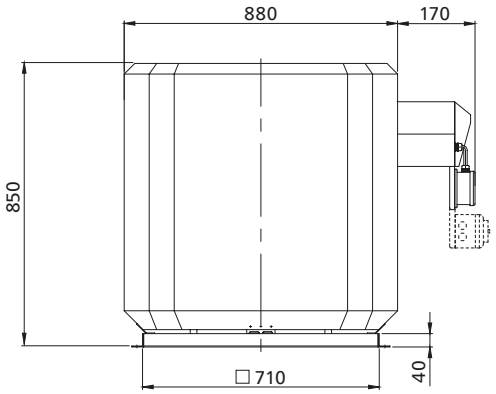
Counter flange PK



Service switch WS

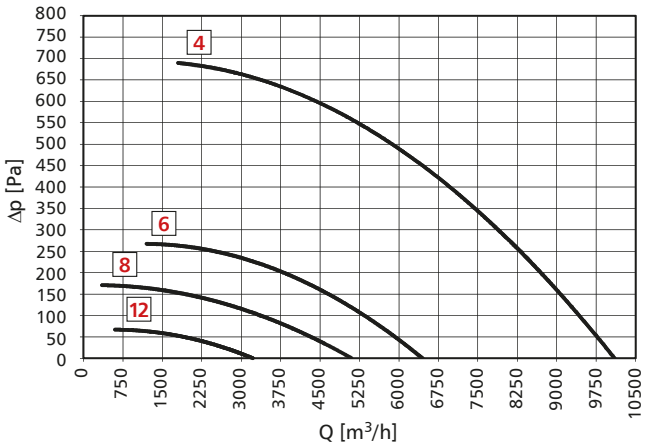
mcr Pasat 40





mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
40/4-2.2	4	2.2	1500	400	4.7	92	102
40/6-0.55	6	0.55	1000	400	1.6	83	93
40/8-0.37	8	0.37	750	400	1.14	85	95

mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
40/4/6-2.4/0.75	4/6	2.4/0.75	1500/1000	400	5.9/2.1	96	106
40/4/8-2.2/0.37	4/8	2.2/0.37	1500/750	400	5.5/2	92	102
40/6/12-0.75/0.15	6/12	0.75/0.15	1000/500	400	2.1/0.8	86	96

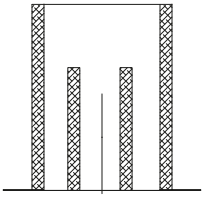


fan									sound power level Lw(A)*
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	[dB A]
mcr Pasat 40/4	55	65	79	84	86	85	80	71	91
mcr Pasat 40/6	44	54	69	74	76	74	70	61	80
mcr Pasat 40/8	39	49	63	68	70	69	64	56	75
mcr Pasat 40/4/6	55	65	79	84	86	85	80	71	91
mcr Pasat 40/4/8	55	65	79	84	86	85	80	71	91
mcr Pasat 40/6/12	44	54	69	74	76	74	70	61	80

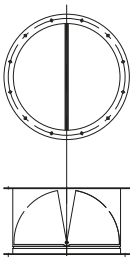
*Sound power level Lw(A) was established for fan's highest efficiency point.

Accessories

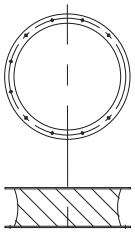
Roof base PD



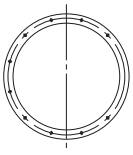
Soundproof roof base PD-T



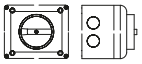
Automatic back draft damper KS-V



Flexible connection KD

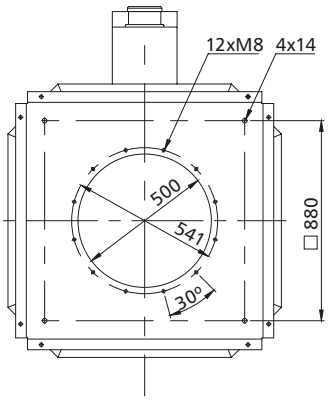


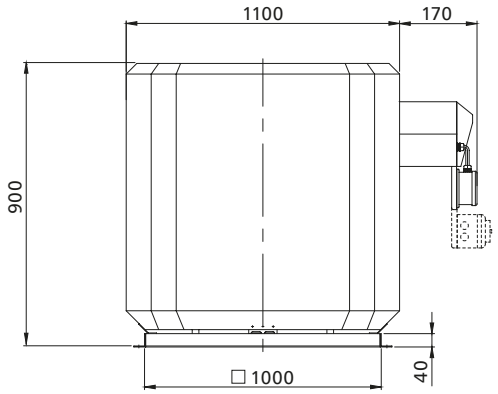
Counter flange PK



Service switch WS

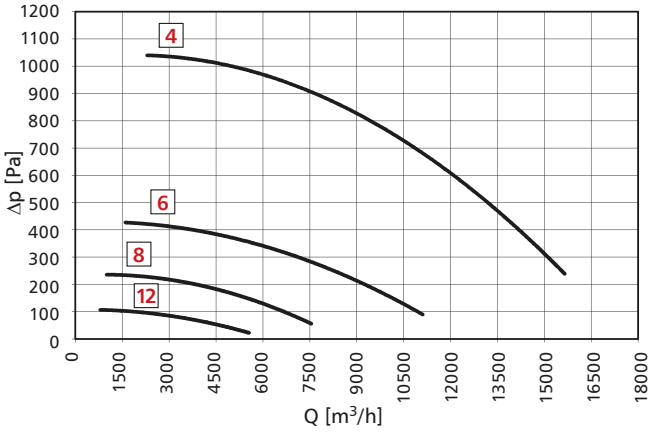
mcr Pasat 50





mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
50/4-4	4	4	1500	400	8.2	135	147
50/6-1.1	6	1.1	1000	400	2.85	122	134
50/8-0.75	8	0.75	750	400	2.15	127	139

mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
50/4/6-4/1.2	4/6	4/1.2	1500/1000	400	8.1/3	150	162
50/4/8-4/0.75	4/8	4/0.75	1500/750	400	8.7/3.5	143	155
50/6/12-1.1/0.18	6/12	1.1/0.18	1000/500	400	3.2/1.2	123	135

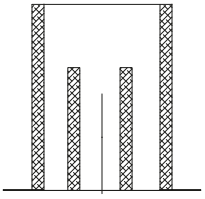


fan									sound power level Lw(A)*
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	[dB A]
mcr Pasat 50/4	61	70	85	90	92	91	86	77	96
mcr Pasat 50/6	51	61	76	81	83	81	77	68	87
mcr Pasat 50/8	43	53	67	72	74	73	68	60	79
mcr Pasat 50/4/6	61	70	85	90	92	91	86	77	96
mcr Pasat 50/4/8	61	70	85	90	92	91	86	77	96
mcr Pasat 50/6/12	51	61	76	81	83	81	77	68	87

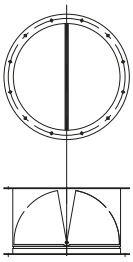
*Sound power level Lw(A) was established for fan's highest efficiency point.

Accessories

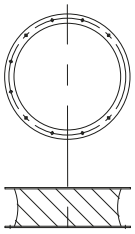
Roof base PD



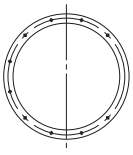
Soundproof roof base PD-T



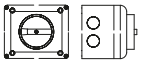
Automatic back draft damper KS-V



Flexible connection KD

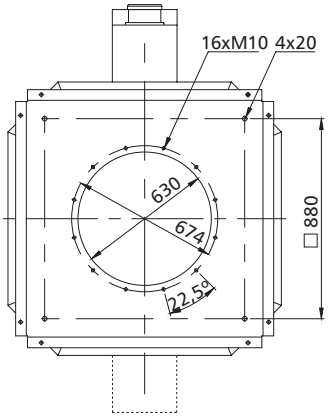


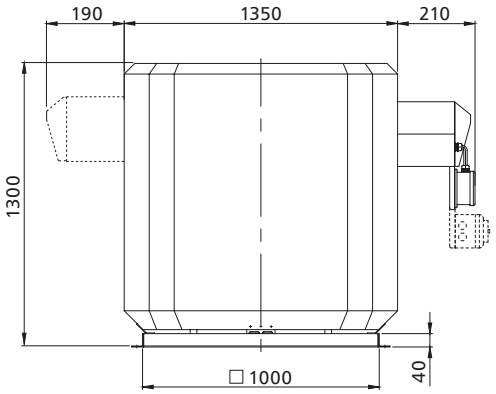
Counter flange PK



Service switch WS

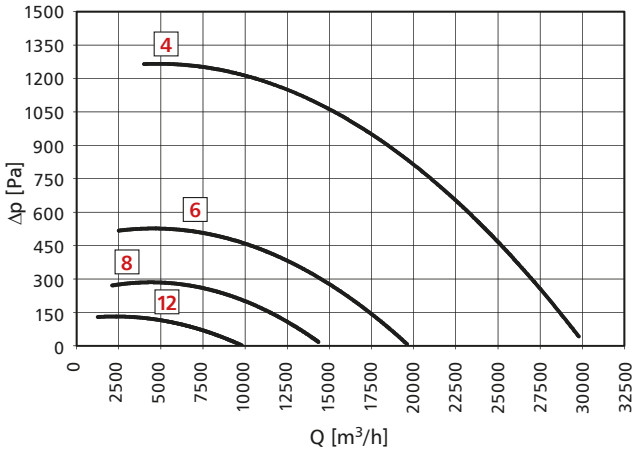
mcr Pasat 63 [I]





mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
63/4-11	4	11	1500	400/690	21.5	272	297
63/6-4	6	4	1000	400	9.4	273	298
63/8-1.5	8	1.5	750	400	3.85	259	284

mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
63/4/6-11/3.7	4/6	11/3.7	1500/1000	400	22.6/9.3	315	340
63/4/8-11/2.8	4/8	11/2.8	1500/750	400	21.6/7.7	315	340
63/6/12-4/0.65	6/12	4/0.65	1000/500	400	10.4/3.1	290	315

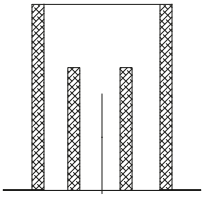


fan									sound power level Lw(A)*
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	[dB A]
mcr Pasat 63/4	64	74	88	93	95	94	89	81	100
mcr Pasat 63/6	56	66	80	85	87	86	81	73	92
mcr Pasat 63/8	50	59	74	79	81	80	75	66	85
mcr Pasat 63/4/6	64	74	88	93	95	94	89	81	100
mcr Pasat 63/4/8	64	74	88	93	95	94	89	81	100
mcr Pasat 63/6/12	56	66	80	85	87	86	81	73	92

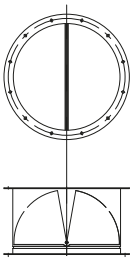
*Sound power level Lw(A) was established for fan's highest efficiency point.

Accessories

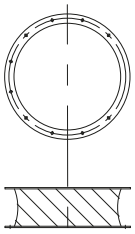
Roof base PD



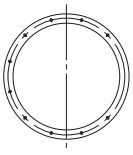
Soundproof roof base PD-T



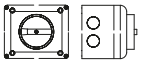
Automatic back draft damper KS-V



Flexible connection KD

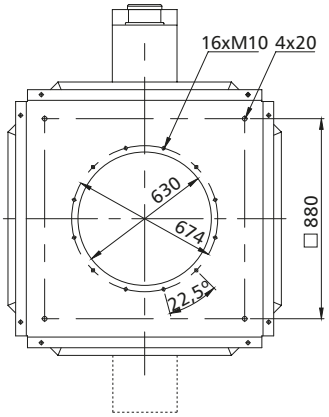


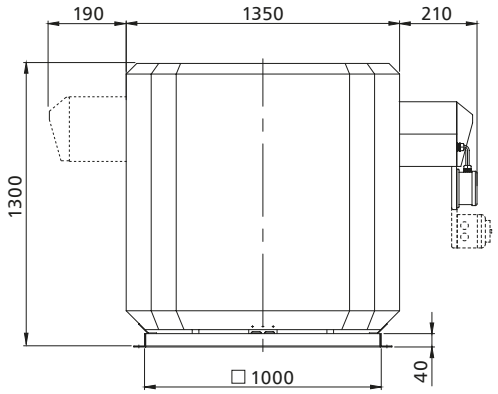
Counter flange PK



Service switch WS

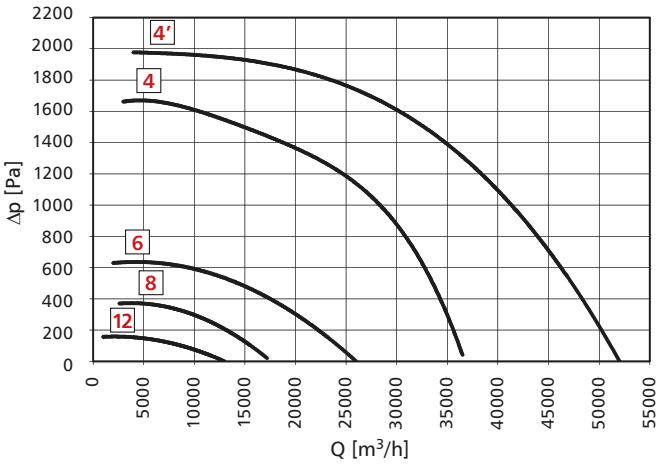
mcr Pasat 63 [II]





mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
63/4-30	4'	30	1500	400/690	58.2	439	468
63/4-18.5	4	18.5	1500	400/690	35.5	343	368
63/6-5.5	6	5.5	1000	400/690	12.6	282	307
63/8-2.2	8	2.2	750	400	5.7	271	296

mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
63/4/6-18.5/6.5	4/6	18.5/6.5	1500/1000	400	34.1/14.8	366	391
63/4/8-18.5/4.8	4/8	18.5/4.8	1500/750	400	36.6/12.1	342	367
63/6/12-5.5/1	6/12	5.5/1	1000/500	400	14.1/5.4	298	323

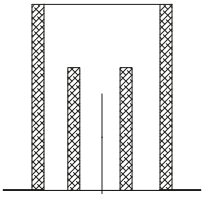


fan									sound power level Lw(A)*
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	[dB A]
mcr Pasat 63/4'	72	81	96	101	103	102	97	88	107
mcr Pasat 63/4	68	78	93	98	100	98	94	85	104
mcr Pasat 63/6	58	68	83	88	90	88	84	75	94
mcr Pasat 63/8	50	55	74	75	81	80	75	66	85
mcr Pasat 63/4/6	68	78	93	98	100	98	94	85	104
mcr Pasat 63/4/8	68	78	93	98	100	98	94	85	104
mcr Pasat 63/6/12	58	68	83	88	90	88	84	75	94

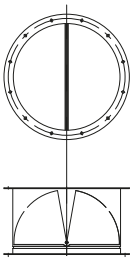
*Sound power level Lw(A) was established for fan's highest efficiency point.

Accessories

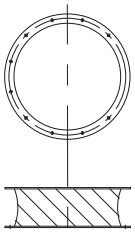
Roof base PD



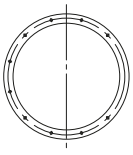
Soundproof roof base PD-T



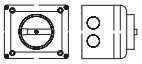
Automatic back draft damper KS-V



Flexible connection KD

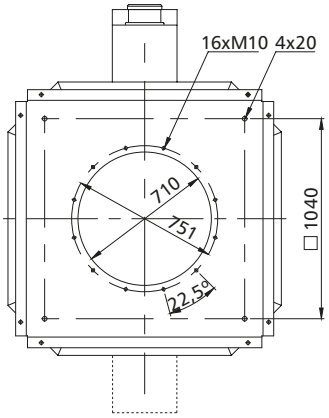


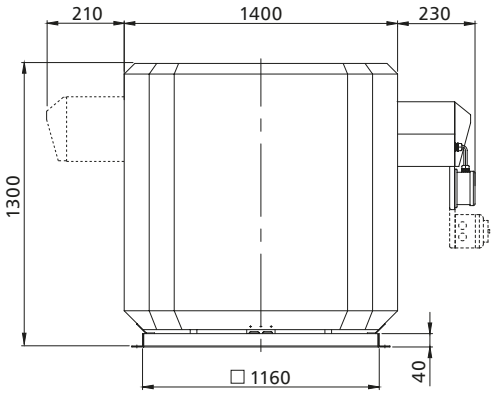
Counter flange PK



Service switch WS

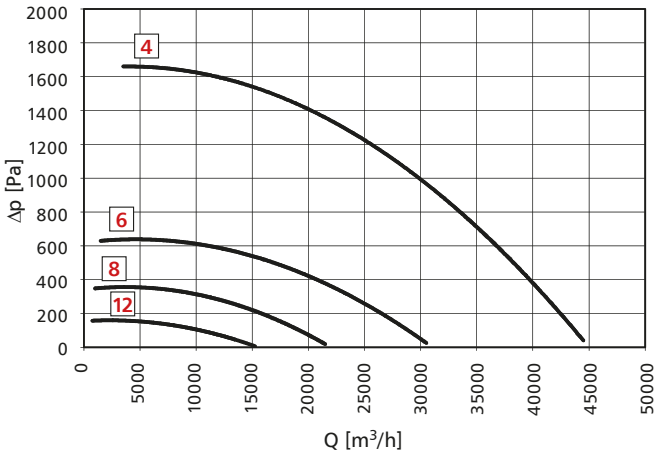
mcr Pasat 71 [I]





mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
71/4-18.5	4	18.5	1500	400/690	35.5	368	397
71/6-5.5	6	5.5	1000	400/690	12.6	307	336
71/8-2.2	8	2.2	750	400	5.7	296	325

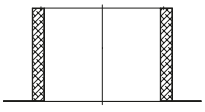
mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
71/4/6-18.5/6.5	4/6	18.5/6.5	1500/1000	400	34.1/14.8	391	420
71/4/8-18.5/4.8	4/8	18.5/4.8	1500/750	400	36.6/12.1	367	396
71/6/12-5.5/1	6/12	5.5/1	1000/500	400	14.1/5.4	323	352



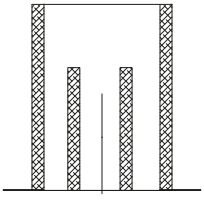
fan									sound power level Lw(A)*
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	[dB A]
mcr Pasat 71/4	68	78	92	97	99	98	93	85	104
mcr Pasat 71/6	58	68	83	88	90	88	84	75	94
mcr Pasat 71/8	52	62	76	81	83	82	77	68	88
mcr Pasat 71/4/6	68	78	92	97	99	98	93	85	104
mcr Pasat 71/4/8	68	78	92	97	99	98	93	85	104
mcr Pasat 71/6/12	58	68	83	88	90	88	84	75	94

*Sound power level Lw(A) was established for fan's highest efficiency point.

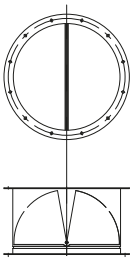
Accessories



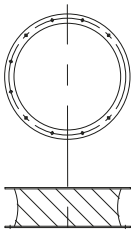
Roof base PD



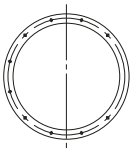
Soundproof roof base PD-T



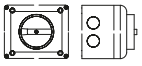
Automatic back draft damper KS-V



Flexible connection KD

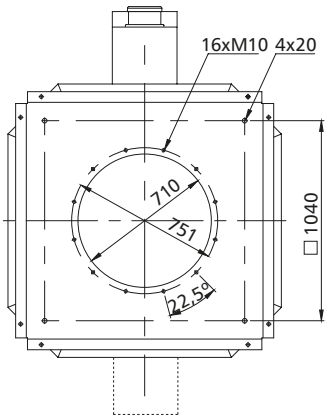


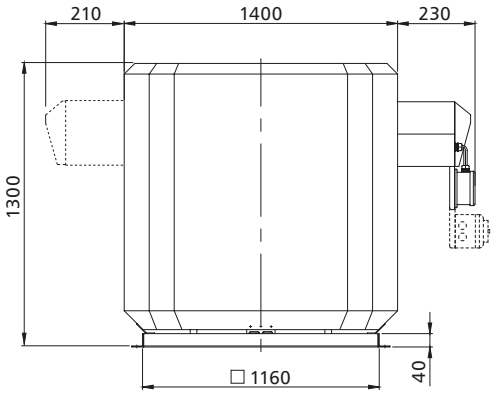
Counter flange PK



Service switch WS

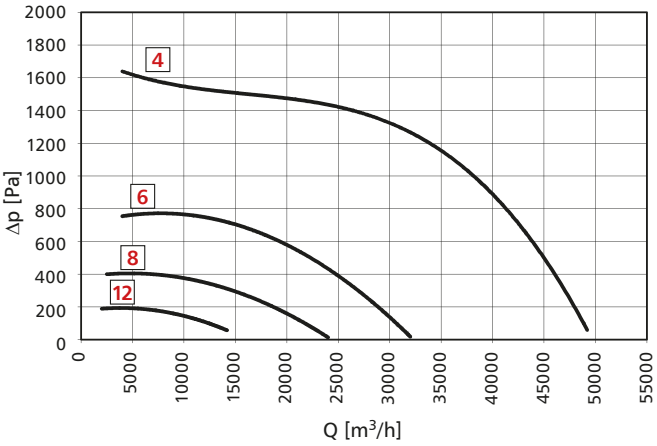
mcr Pasat 71 [II]





mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
71/4-22	4	22	1500	400/690	41.5	400	429
71/6-7.5	6	7.5	1000	400/690	17	332	361
71/8-3	8	3	750	400	7.6	304	333

mcr Pasat	no.	P [kW]	n [1/min]	Un [V]	In [A]	m1 [kg]	m2 [kg]
71/4/6-22/7.5	4/6	22/7.5	1500/1000	400	41.5/16.6	410	439
71/4/8-22/5.3	4/8	22/5.3	1500/750	400	40.9/13.2	405	434
71/6/12-7.5/1.3	6/12	7.5/1.3	1000/500	400	17.5/5.5	341	370

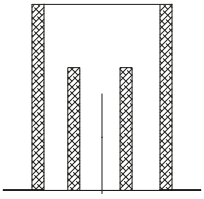


fan									sound power level Lw(A)*
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	[dB A]
mcr Pasat 71/4	69	79	94	99	101	99	95	86	105
mcr Pasat 71/6	61	71	86	91	93	91	87	78	97
mcr Pasat 71/8	54	64	78	83	85	84	79	71	90
mcr Pasat 71/4/6	69	79	94	99	102	99	95	86	105
mcr Pasat 71/4/8	69	79	94	99	101	99	95	86	105
mcr Pasat 71/6/12	61	71	86	91	93	91	87	78	97

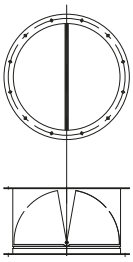
*Sound power level Lw(A) was established for fan's highest efficiency point.

Accessories

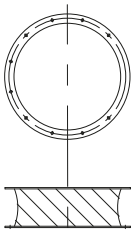
Roof base PD



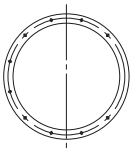
Soundproof roof base PD-T



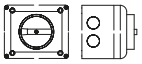
Automatic back draft damper KS-V



Flexible connection KD



Counter flange PK



Service switch WS

1.5. accessories

1.5.1. roof bases PD, PD-T

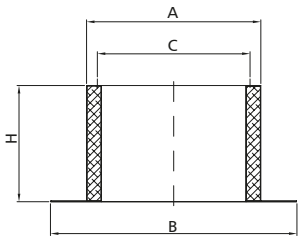
The base for installing a fan on the roof. It is installed to the fan housing (i.e. mounting plate) with M10 or M14 bolts, depending on the fan size.

Standard bases are made of galvanized steel sheet.

Available versions:

Roof base PD - for flat and pitched roofs
Roof base PD-T - with noise insulation, for flat and pitched roofs

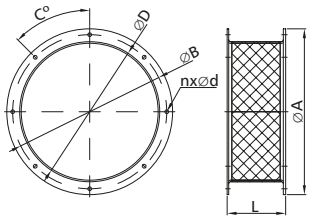
slip-on roof bases PD; PD-T							
fan	**type**	**A [mm]**	**B [mm]**	**C [mm]**	**H-PD [mm]**	**H-PD-T [mm]**	**nxM**
mcr Pasat 31	**PD-31**	525	740	460	350	900	4xM10
mcr Pasat 35	**PD-35**	675	870	600	350	900	4xM10
mcr Pasat 40	**PD-40**	675	870	600	350	900	4xM10
mcr Pasat 50	**PD-50**	965	1150	880	350	900	4xM12
mcr Pasat 63	**PD-63**	965	1150	880	450	900	4xM13
mcr Pasat 71	**PD-71**	1125	1310	1040	450	900	4xM14



1.5.2. round flexible connections KD

The flexible connection KD is used for eliminating vibrations generated during operation of the fan which might be transmitted to the ventilation system. May also compensate thermal expansion of ducts during the operation of smoke exhaustion system.

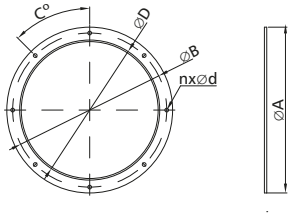
flexible connections KD								
fan	**type**	**D [mm]**	**~A [mm]**	**B [mm]**	**L [mm]**	**C [°]**	**nxd [mm]**	**m [kg]**
mcr Pasat 31	**KD-31**	315	385	356	150	45	8x9.6	1.0
mcr Pasat 35	**KD-35**	355	425	395	150	45	8x9.6	1.1
mcr Pasat 40	**KD-40**	400	470	438	150	30	12x9.6	1.3
mcr Pasat 50	**KD-50**	500	570	541	150	30	12x9.6	1.6
mcr Pasat 63	**KD-63**	630	710	674	200	22.5	16x10.5	2.0
mcr Pasat 71	**KD-71**	710	790	751	200	22.5	16x10.5	2.3



1.5.3. counter flanges PK

The counter flange is designed for installing flexible connections KD to mcr Pasat fan and the ventilation system. It is made of powder-coated steel sheet as standard.

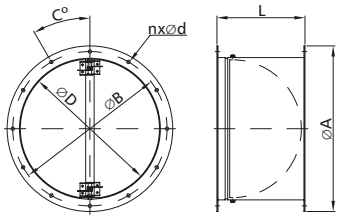
counter flanges PK							
fan	**type**	**D [mm]**	**~A [mm]**	**B [mm]**	**C [°]**	**nxd [mm]**	**m [kg]**
mcr Pasat 31	**PK-31**	315	385	356	45	8x9.6	0.9
mcr Pasat 35	**PK-35**	359	425	395	45	8x9.6	0.9
mcr Pasat 40	**PK-40**	404	470	438	30	12x9.6	1.0
mcr Pasat 50	**PK-50**	504	570	541	30	12x9.6	1.3
mcr Pasat 63	**PK-63**	634	710	674	22.5	16x10.5	1.8
mcr Pasat 71	**PK-71**	716	790	751	22.5	16x10.5	2.0



1.5.4. automatic back draft dampers KS-V

The automatic back draft damper KS-V prevents outside air from entering the building's interior during the fan's standstill which significantly lowers heat losses in winter and prevents uncontrolled air circulation. The device's housing is made of powder-painted steel sheet, with the flap itself made of sheet aluminium.

automatic back draft dampers KS-V								
fan	type	D [mm]	~A [mm]	B [mm]	L [mm]	C [°]	nxd [mm]	m [kg]
mcr Pasat 31	KS-V-31	315	385	356	220	45	8x9.6	5.7
mcr Pasat 35	KS-V-35	355	425	395	240	45	8x9.6	6.6
mcr Pasat 40	KS-V-40	400	470	438	250	30	12x9.6	7.6
mcr Pasat 50	KS-V-50	500	570	541	320	30	12x9.6	11.3
mcr Pasat 63	KS-V-63	630	710	674	360	22.5	16x10.5	16.2
mcr Pasat 71	KS-V-71	710	790	751	430	22.5	16x10.5	20.8

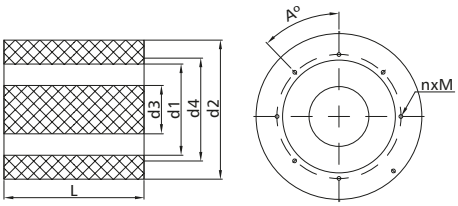


1.5.5. noise silencers TH

The noise silencer TH is designed to reduce the noise generated during fan operation in the ventilation system. The silencer's housing is made of galvanised steel sheet with core and internal part made of perforated zinc coated sheet. High-temperature wool with increased sound absorbing characteristics is used for damping.

The threaded holes in the silencer allow direct fastening on the fan housing flange. In this case, seal the joint with high-temperature silicone.

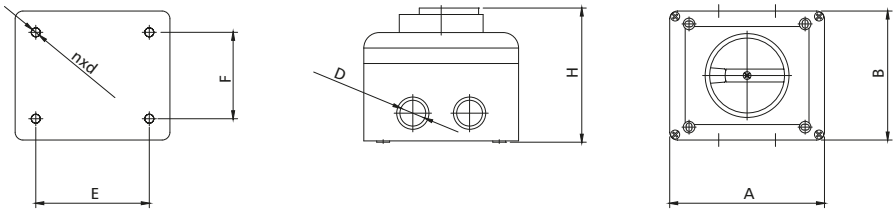
noise silencers TH									
fan	type	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	A [°]	nxM [mm]	m [kg]
mcr Pasat 31	TH-31	315	380	180	356	950	45	8xM8	35
mcr Pasat 35	TH-35	359	550	200	395	950	45	8xM8	41
mcr Pasat 40	TH-40	404	600	220	438	950	30	12xM8	53
mcr Pasat 50	TH-50	504	700	280	541	950	30	12xM8	62
mcr Pasat 63	TH-63	634	830	355	674	950	22.5	16xM8	78
mcr Pasat 71	TH-71	710	960	400	751	1400	22.5	16xM8	122



1.5.6. service switches WS

The service switch WS is designed for cutting off power from fan for the period of servicing. The switch has an extra auxiliary contact for signaling the cut-off position in case of not returning the switch to original position, i.e. power supply to fan after service inspection. For installation directly on the fan's housing, use special support bracket. The 3-pole service switch is designed for one-speed 230/400V motors and the 6-pole switch for one- and two-speed motors rated at 400/690 V and two-speed motors rated at 400/400 V.

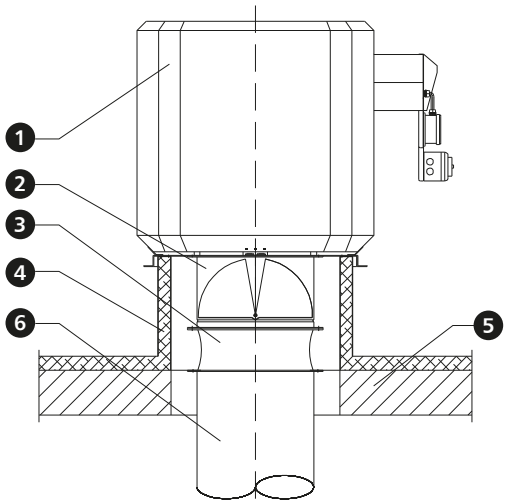
service switches WS										
type	A [mm]	B [mm]	E [mm]	F [mm]	H [mm]	nxd [mm]	U [V]	I [A]	glands D [mm]	comments
WS-16/3	90	90	67	48	95	4x4	690	16	M20[x4]	3-pole
WS-16/6	90	90	67	48	95	4x4	690	16	M20[x4]	3-pole
WS-32/6	116	100	90	52	108	4x4	690	32	M25[x4]	6-pole
WS-63/6	170	155	105	95	185	4x6	690	63	M25/M32[x4]	6-pole
WS-100/6	200	180	130	125	200	4x6	690	100	M32/M40[x4]	6-pole



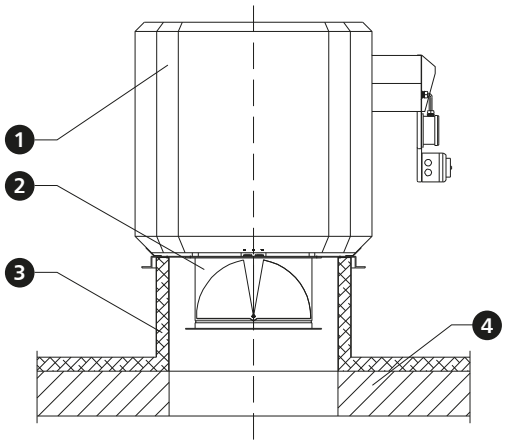
1.6. installation

The fan's design enables the installation on a roof base or a square brick pedestal.

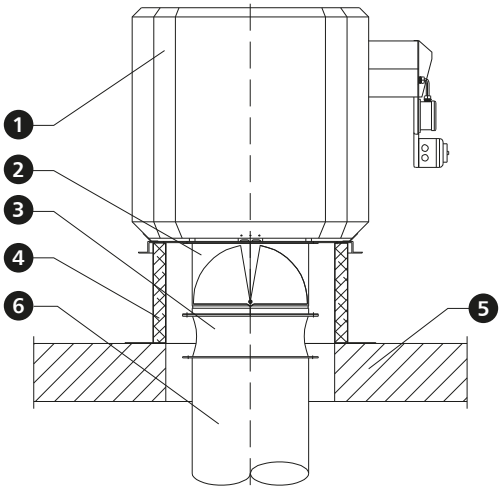
1.6.1. sample fan installation on a flat roof



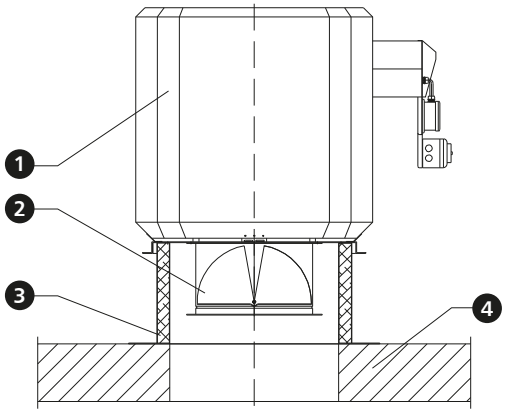
1. mcr Pasat fan
2. automatic back draft damper KS-V (option)
3. flexible connection KD with counter flange (option)
4. pedestal, installed during construction
5. flat roof
6. ventilation duct



1. mcr Pasat fan
2. automatic back draft damper KS-V (option)
3. pedestal, installed during construction
4. flat roof

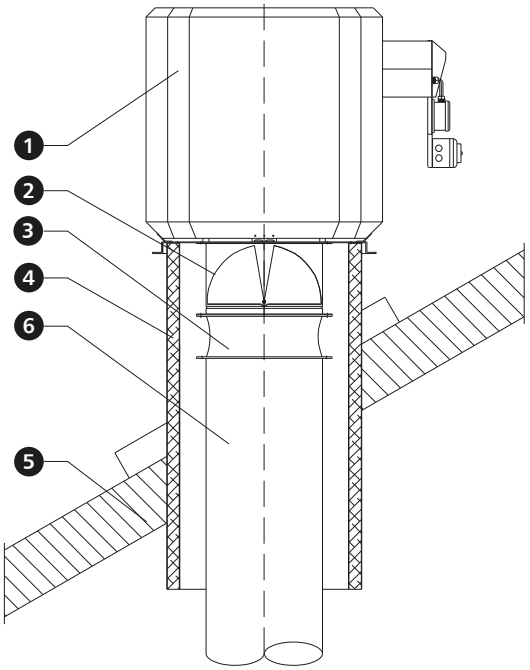


1. mcr Pasat fan
2. automatic back draft damper KS-V (option)
3. flexible connection KD with counter flange (option)
4. slip-on roof base PD (option)
5. flat roof
6. ventilation duct

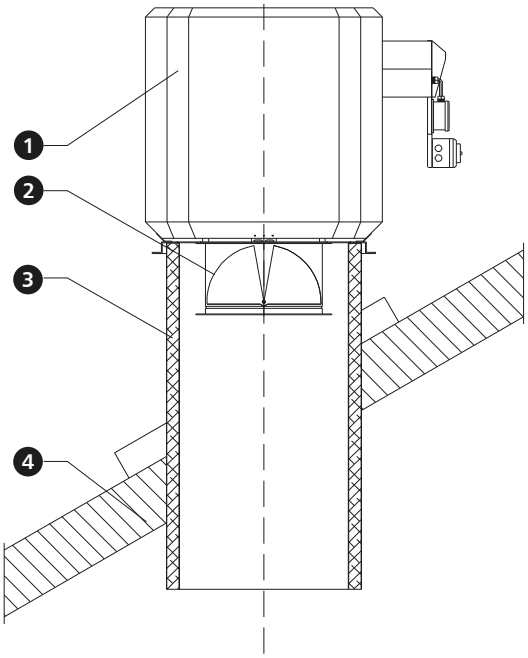


1. mcr Pasat fan
2. automatic back draft damper KS-V (option)
3. slip-on roof base PD (option)
4. flat roof

1.6.2. sample fan installation on a pitched roof

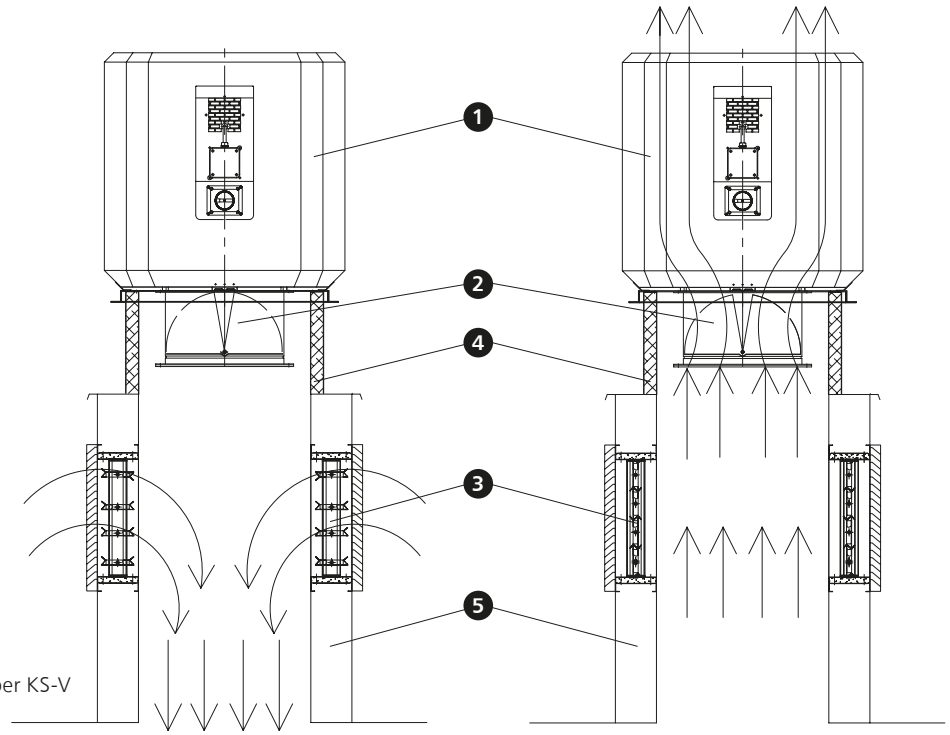


1. mcr Pasat fan
2. automatic back draft damper KS-V (option)
3. flexible connection KD with counter flange (option)
4. roof base PD for pitched roof (option)
5. pitched roof
6. ventilation duct



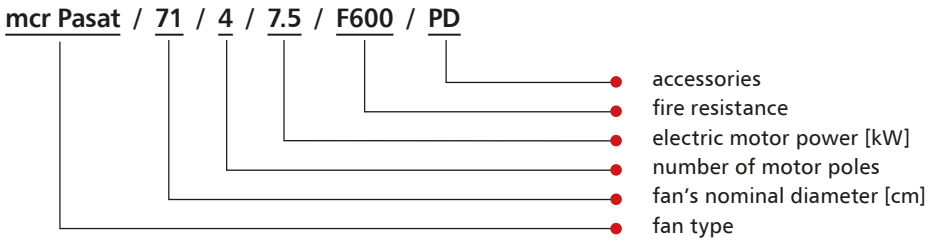
1. mcr Pasat fan
2. automatic back draft damper KS-V (option)
3. roof base PD for pitched roof (option)
4. pitched roof

1.6.3. sample installation of fan on concrete pedestal with a dedicated damper mcr WIP for natural ventilation and extracting smoke from underground garages



1. mcr Pasat fan
2. automatic back draft damper KS-V (option)
3. mcr WIP damper
4. slip-on roof base PD (option)
5. concrete pedestal

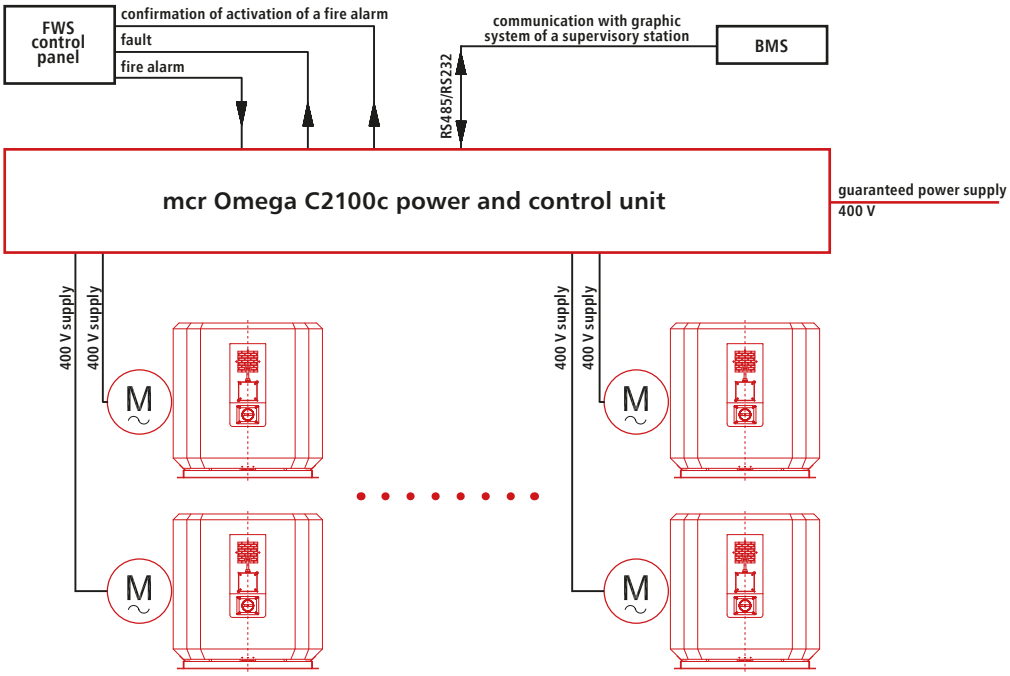
1.7. designation



1.8. 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 Pasat fans using mcr Omega unit:



PRODUCT CONFIGURATOR AT WWW.MERCOR.COM.PL

CE 1488-CPR-0345/W

CE 1488-CPR-0129/W

CERTYFIKACJA PRODUKTU

- **Certificate of constancy of performance 1488-CPR-0345/W for F300 and F200, and 1488-CPR-0129/W for F400.**
- **Functional properties according to EN 12101-3:2002+AC:2005.**
- **Patent no. 216872 issued by Patent Office of the Republic of Poland.**
- **For vertical and horizontal installation.**
- **The impeller's blades are adjustable in 1° increments to enable reaching the required working point.**
- **Also available without fire resistance - BO.**

2.1. use

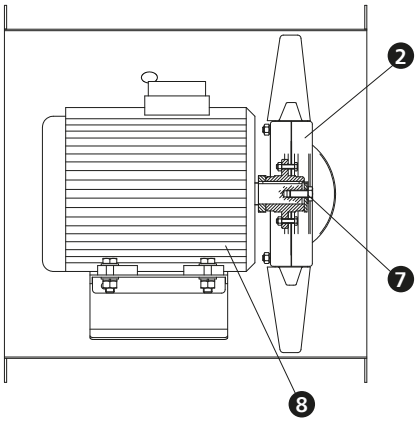
mcr Monsun axial fans are designed for fire ventilation systems for smoke exhaust and air supply, also for comfort ventilation systems as intake or exhaust fans.

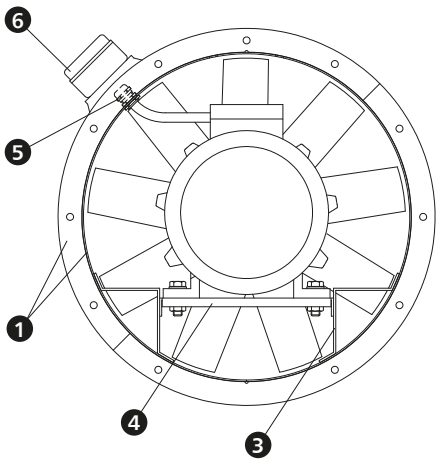
The smoke exhaust fans are designed for removing heat, smoke and combustion gases generated in rooms during fire. They facilitate evacuation of people from area on fire and fire fighting procedures by fire brigades. They also protect the building's structure and equipment against effects of high temperatures and stop fire from spreading to adjacent areas.

The devices can be used indoors and outdoors. The smoke exhaust fans are most often used in civic buildings, shopping malls, boarding houses and industrial halls.

The mcr Monsun fans can feature one- or two-speed motors and combine comfort ventilation and smoke exhaust functions, e.g. both for ventilation and smoke exhaust in underground garages.

2.2. design





1. fan housing
2. axial impeller
3. motor base support
4. motor base
5. cable gland
6. terminal box
7. impeller protection
8. electric motor, fire resistant at the specific temperature class

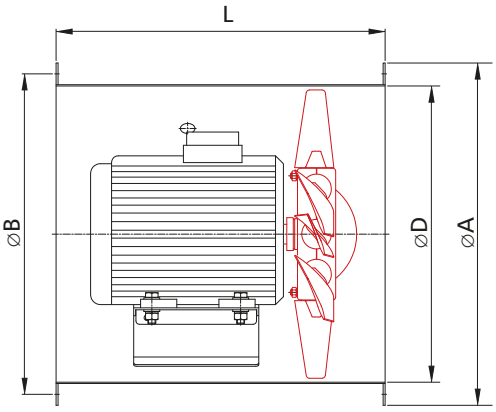
The fan's housing is made of steel sheet from 2 mm to 6 mm thick depending on the fan size, hot galvanized and powder-coated, cylindrically shaped, with connection flanges for fire/comfort ventilation system. Each fan has a revision cover on the casing for checking correctness of impeller's rotation direction. The electric motor is placed on support inside the casing. An impeller with 9 blades in case of fans diameter 355 mm, 400 mm and 450 mm or with 12 blades for diameters 500 mm, 560 mm, 630 mm, 710 mm, 800 mm, 900 mm and 1000 mm is placed directly on the motor's pirot. Blades are cast, with aerodynamic profile, adjustable in 1° increments to enable reaching the required flow parameters. The impeller can work at various blade angles and blade numbers.

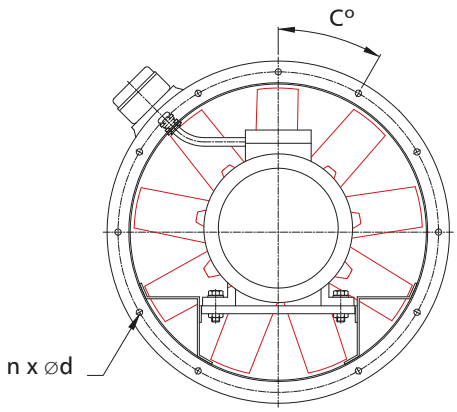
Depending on the user's requirements, the fan may be equipped with a three phase motor: one- or two-speed with different rotational speeds (3000, 1500, 1000, 750 rpm), set on a support fixed to fan's housing, without serial assembled thermal protection. The fan with fire resistance motor features insulation class H, and the fan without fire resistance features insulation class F. In both cases the mechanical protection class is IP 55. Wires with the required fire resistance come out from the motor. The engine is designed for operation with an inverter.

2.3. dimensions

Depending on the output or installation location the axial fan mcr Monsun is available in different housing sizes from diameter D 355 to 1000.

fan	D [mm]	~A [mm]	~L [mm]	B [mm]	C [°]	nxd [mm]
mcr Monsun 35	355	425	400	395	45	8 x 9.6
mcr Monsun 40	400	470	500	438	30	12 x 9.6
mcr Monsun 45	450	520	500	487	30	12 x 9.6
mcr Monsun 50	500	570	600	541	30	12 x 9.6
mcr Monsun 56	560	640	700	605	22,5	16 x 10.5
mcr Monsun 63	630	710	600	674	22,5	16 x 10.5
mcr Monsun 71	710	790	750	751	22,5	16 x 10.5
mcr Monsun 80	800	875	750	837	15	24 x 10.5
mcr Monsun 90	900	975	900	934	15	24 x 10.5
mcr Monsun 100	1000	1080	1000	1043	15	24 x 10.5





2.4. technical parameters

2.4.1. motor power

Range of motor power depending on the size of fan and rotational speeds of the impeller.

motor speed n = 750 [rpm]		motor speed n =1000 [rpm]		motor speed n = 1500 [rpm]		motor speed n = 3000 [rpm]	
diameter of fan D [mm]	power range P [kW]	diameter of fan D [mm]	power range P [kW]	diameter of fan D [mm]	power range P [kW]	diameter of fan D [mm]	power range P [kW]
630	0.25-0.75	**500**	0.25-0.55	**355**	0.55	**355**	1.1-1.5
710	0.55-1.1	**560**	0.55-1.1	**400**	0.75	**400**	1.5-3
800	1.1-2.2	**630**	0.75-1.5	**450**	0.55-1.1	**450**	2.2-4
900	1.5-4	**710**	1.1-3	**500**	0.55-1.5	**500**	4-11
1000	2.2-5.5	**800**	1.5-5.5	**560**	1.5-3	**560**	5.5-15
		900	3.0-11	**630**	2.2-4		
		1000	5.5-15	**710**	5.5-11		
				800	7.5-15		
				900	11-30		
				1000	18.5-45		

2.4.2. fire resistance

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

- class **F400** – fire resistance 400°C/120 min.
- class **F300** – fire resistance 300°C/60 min.
- class **F200** – fire resistance 200°C/120 min.

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

2.4.3. technical and flow parameters

The working parameters of mcr Monsun fan cover the range from 3000 m3/h to 100000 m3/h at pressure up to 1800 Pa. Higher pressure may be reached using two mcr Monsun fans with the same diameter coupled in series.

one-speed fans

size	diameter D [mm]	impeller setpoint [°]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	weight m [kg]
35/4-0.55-35	350	35	1500	0.55	1.5	230/400 Y	28
35/4-0.55-25		25		0.55	1.5	230/400 Y	28
35/4-0.55-20		20		0.55	1.5	230/400 Y	28
35/4-0.55-15		15		0.55	1.5	230/400 Y	28
35/4-0.55-10		10		0.55	1.5	230/400 Y	28
35/4-0.55-5		5		0.55	1.5	230/400 Y	28
35/2-1.5-35	350	35	3000	1.5	3.05	230/400 Y	35
35/2-2.2-25		25		2.2	4.4	230/400 Y	38
35/2-1.5-20		20		1.5	3.05	230/400 Y	35
35/2-1.1-10		10		1.1	2.3	230/400 Y	33
35/2-1.1-5		5		1.1	2.3	230/400 Y	33
40/4-0.75-35	400	35	1500	0.75	2	230/400 Y	36
40/4-0.75-30		30		0.75	2	230/400 Y	36
40/4-0.55-25		25		0.55	1.5	230/400 Y	34
40/4-0.55-15		15		0.55	1.5	230/400 Y	34
40/4-0.55-10		10		0.55	1.5	230/400 Y	34
40/4-0.55-5		5		0.55	1.5	230/400 Y	34
40/2-3-35	400	35	3000	3	5.9	230/400 Y	55
40/2-4-30		30		4	7.8	230/400 Y	58
40/2-4-25		25		4	7.8	230/400 Y	58
40/2-2.2-15		15		2.2	4.4	230/400 Y	44
40/2-2.2-10		10		2.2	7.8	230/400 Y	44
40/2-1.5-5		5		1.5	3.05	230/400 Y	40
45/4-1.1-25	450	25	1500	1.1	2.5	230/400 Y	42
45/4-0.75-20		20		0.75	2	230/400 Y	39
45/4-0.75-15		15		0.75	2	230/400 Y	39
45/4-0.55-10		10		0.55	1.5	230/400 Y	36
45/4-0.55-5		5		0.55	1.5	230/400 Y	36
45/2-4-25	450	25	3000	4	7.8	230/400 Y	60
45/2-4-20		20		4	7.8	230/400 Y	60
45/2-3-15		15		3	5.9	230/400 Y	58
45/2-2.2-10		10		2.2	4.4	230/400 Y	46
45/2-2.2-5		5		2.2	4.4	230/400 Y	46
50/6-0.55-0	500	0	1000	0.55	1.75	230/400 Y	45
50/6-0.55-5		5		0.55	1.75	230/400 Y	45
50/6-0.37-10		10		0.37	1.2	230/400 Y	43
50/6-0.37-15		15		0.37	1.2	230/400 Y	43
50/6-0.25-20		20		0.25	0.85	230/400 Y	42
50/6-0.25-25		25		0.25	0.85	230/400 Y	42
50/6-0.25-30		30		0.25	0.85	230/400 Y	42
50/4-1.5-0	500	0	1500	1.5	3.4	230/400 Y	52
50/4-1.5-5		5		1.5	3.4	230/400 Y	52
50/4-1.1-10		10		1.1	2.5	230/400 Y	50
50/4-1.1-15		15		1.1	2.5	230/400 Y	50
50/4-0.75-20		20		0.75	2	230/400 Y	46
50/4-0.75-25		25		0.75	2	230/400 Y	46
50/4-0.55-30		30		0.55	1.5	230/400 Y	46
50/2-11-0	500	0	3000	11	20	400/690 D/Y	129
50/2-11-5		5		11	20	400/690 D/Y	129
50/2-7.5-10		10		7.5	14.1	400/690 D/Y	100
50/2-7.5-15		15		7.5	14.1	400/690 D/Y	100
50/2-5.5-20		20		5.5	10.4	230/400 Y	92
50/2-5.5-25		25		5.5	10.4	230/400 Y	92
50/2-4-30		30		4	7.8	230/400 Y	70

one-speed fans

size	diameter D [mm]	impeller setpoint [°]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	weight m [kg]
56/6-1.1-0	560	0	1000	1.1	2.95	230/400 Y	58
56/6-1.1-5		5		1.1	2.95	230/400 Y	58
56/6-0.75-10		10		0.75	2	230/400 Y	54
56/6-0.75-15		15		0.75	2	230/400 Y	54
56/6-0.55-20		20		0.55	1.5	230/400 Y	49
56/6-0.55-25		25		0.55	1.75	230/400 Y	49
56/6-0.55-30		30		0.55	1.75	230/400 Y	49
56/4-3-0	560	0	1500	3	6.2	230/400 Y	69
56/4-3-5		5		3	6.2	230/400 Y	69
56/4-2.2-10		10		2.2	4.6	230/400 Y	67
56/4-2.2-15		15		2.2	4.6	230/400 Y	67
56/4-1.5-20		20		1.5	3.4	230/400 Y	54
56/4-1.5-25		25		1.5	3.4	230/400 Y	54
56/4-1.5-30		30		1.5	3.4	230/400 Y	54
56/2-15-0	560	0	3000	15	27	400/690 D/Y	147
56/2-15-5		5		15	27	400/690 D/Y	147
56/2-11-10		10		11	20	400/690 D/Y	136
56/2-11-15		15		11	20	400/690 D/Y	136
56/2-7.5-20		20		7.5	14.1	400/690 D/Y	107
56/2-5.5-30		30		5.5	10.4	230/400 Y	99
63/4-4-5	630	5	1500	4	8.2	230/400 Y	81
63/4-4-10		10		4	8.2	230/400 Y	81
63/4-3-15		15		3	6.2	230/400 Y	74
63/4-3-20		20		3	6.2	230/400 Y	74
63/4-3-25		25		3	6.2	230/400 Y	74
63/4-2.2-30		30		2.2	4.6	230/400 Y	72
63/6-1.5-5	630	5	1000	1.5	3.7	230/400 Y	76
63/6-1.5-10		10		1.5	3.7	230/400 Y	76
63/6-1.1-15		15		1.1	2.95	230/400 Y	62
63/6-1.1-20		20		1.1	2.95	230/400 Y	62
63/6-0.75-25		25		0.75	2	230/400 Y	58
63/8-0.55-5	630	5	750	0.55	1.8	230/400 Y	60
63/8-0.75-10		10		0.75	2.4	230/400 Y	68
63/8-0.55-15		15		0.55	1.8	230/400 Y	60
63/8-0.55-20		20		0.55	1.8	230/400 Y	60
63/8-0.37-25		25		0.37	1.25	230/400 Y	56
63/8-0.25-30		30		0.25	1.05	230/400 Y	52
71/4-11-0	710	0	1500	11	20.9	400/690 D/Y	181
71/4-11-5		5		11	20.9	400/690 D/Y	181
71/4-7.5-10		10		7.5	14.5	400/690 D/Y	145
71/4-7.5-15		15		7.5	14.5	400/690 D/Y	145
71/4-7.5-20		20		7.5	14.5	400/690 D/Y	145
71/4-7.5-25		25		7.5	14.5	400/690 D/Y	145
71/4-5.5-30		30		5.5	10.8	230/400 Y	137
71/6-3-0	710	0	1000	3	7	230/400 Y	132
71/6-3-5		5		3	7	230/400 Y	132
71/6-2.2-10		10		2.2	5.2	230/400 Y	119
71/6-2.2-15		15		2.2	5.2	230/400 Y	119
71/6-1.5-20		20		1.5	3.7	230/400 Y	110
71/6-1.5-25		25		1.5	3.7	230/400 Y	110
71/6-1.1-30		30		1.1	2.95	230/400 Y	97
71/8-1.1-0	710	0	750	1.1	3.4	230/400 Y	110
71/8-1.1-5		5		1.1	3.4	230/400 Y	110
71/8-0.75-10		10		0.75	2.4	230/400 Y	104
71/8-0.75-15		15		0.75	2.4	230/400 Y	104
71/8-0.75-20		20		0.75	2.4	230/400 Y	104
71/8-0.55-25		25		0.55	1.8	230/400 Y	96
71/8-0.55-30		30		0.55	1.8	230/400 Y	96

one-speed fans

size	diameter D [mm]	impeller setpoint [°]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	weight m [kg]
80/4-15-0	800	0	1500	15	27.9	400/690 D/Y	207
80/4-15-5		5		15	27.9	400/690 D/Y	207
80/4-11-10		10		11	20.9	400/690 D/Y	190
80/4-11-15		15		11	20.9	400/690 D/Y	190
80/4-11-20		20		11	20.9	400/690 D/Y	190
80/4-11-25		25		11	20.9	400/690 D/Y	190
80/4-7.5-30		30		7.5	14.5	400/690 D/Y	152
80/6-5.5-0	800	0	1000	5.5	12.7	230/400 Y	160
80/6-4-5		5		4	9.3	230/400 Y	150
80/6-3-10		10		3	7	230/400 Y	142
80/6-3-15		15		3	7	230/400 Y	142
80/6-2.2-20		20		2.2	5.2	230/400 Y	127
80/6-1.5-25		25		1.5	3.7	230/400 Y	118
80/8-2.2-0	800	0	750	2.2	6	230/400 Y	143
80/8-2.2-5		5		2.2	6	230/400 Y	143
80/8-1.5-10		10		1.5	4.6	230/400 Y	127
80/8-1.5-15		15		1.5	4.6	230/400 Y	127
80/8-1.1-20		20		1.1	3.4	230/400 Y	118
80/8-1.1-25		25		1.1	3.4	230/400 Y	118
90/4-30-0	900	0	1500	30	55.7	400/690 D/Y	366
90/4-22-5		5		22	40.8	400/690 D/Y	286
90/4-18.5-10		10		18.5	35	400/690 D/Y	237
90/4-15-15		15		15	27.9	400/690 D/Y	222
90/4-15-20		20		15	27.9	400/690 D/Y	222
90/4-11-25		25		11	20.9	400/690 D/Y	205
90/4-11-30		30		11	20.9	400/690 D/Y	205
90/6-11-0	900	0	1000	11	23	400/690 D/Y	230
90/6-7.5-5		5		7.5	16	400/690 D/Y	202
90/6-5.5-10		10		5.5	12.7	230/400 Y	179
90/6-5.5-15		15		5.5	12.7	230/400 Y	179
90/6-5.5-20		20		5.5	12.7	230/400 Y	179
90/6-4-25		25		4	9.3	230/400 Y	169
90/6-3-30		30		3	7	230/400 Y	161
90/8-4-0	900	0	750	4	11.3	230/400 Y	207
90/8-3-5		5		3	8.1	230/400 Y	170
90/8-3-10		10		3	8.1	230/400 Y	170
90/8-2.2-15		15		2.2	6	230/400 Y	162
90/8-2.2-20		20		2.2	6	230/400 Y	162
90/8-1.5-25		25		1.5	4.6	230/400 Y	147
90/8-1.5-30		30		1.5	4.6	230/400 Y	147
100/4-37-5	1000	5	1500	37	69.6	400/690 D/Y	426
100/4-30-10		10		30	55.7	400/690 D/Y	396
100/4-30-20		20		30	55.7	400/690 D/Y	396
100/4-22-25		25		22	40.8	400/690 D/Y	315
100/4-18.5-30		30		18.5	35	400/690 D/Y	266
100/6-11-5	1000	5	1000	11	23	400/690 D/Y	270
100/6-11-10		10		11	23	400/690 D/Y	270
100/6-7.5-20		20		7.5	16	400/690 D/Y	242
100/6-7.5-25		25		7.5	16	400/690 D/Y	242
100/6-5.5-30		30		5.5	12.7	230/400 Y	219
100/8-5.5-5	1000	5	750	5.5	15	230/400 Y	253
100/8-4-10		10		4	11.3	230/400 Y	247
100/8-4-20		20		4	11.3	230/400 Y	247
100/8-3-25		25		3	8.1	230/400 Y	210
100/8-2.2-30		30		2.2	6	230/400 Y	202

The mcr Monsun fan selection program is available at **www.mercor.com.pl**, in the Architect and Designer Zone.

two-speed fans

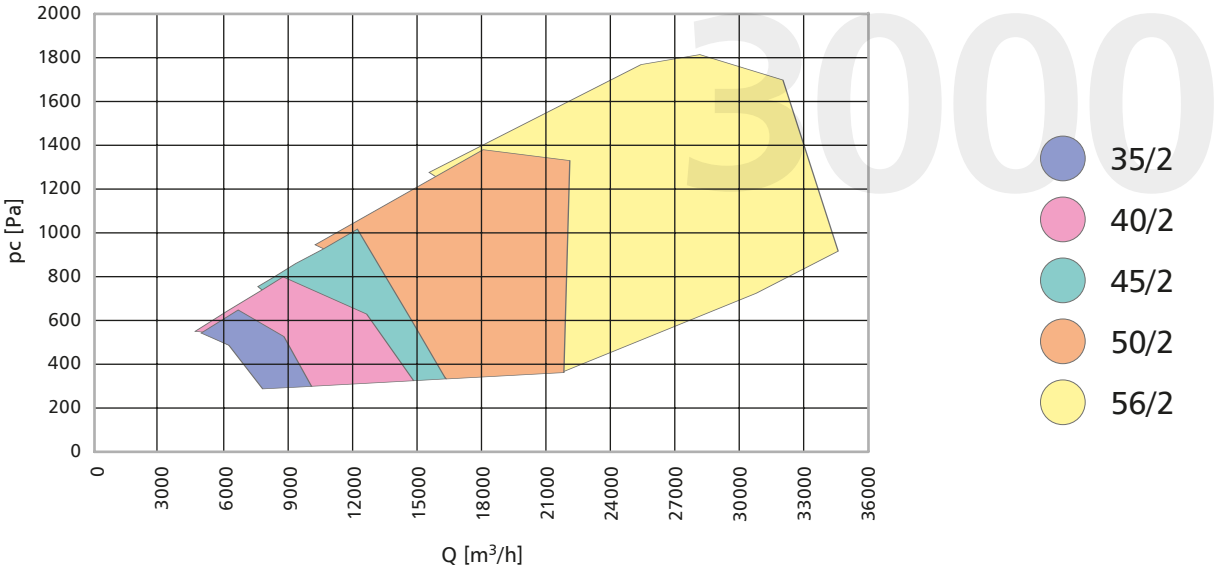
size	diameter D [mm]	impeller setpoint [°]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	weight m [kg]
35/2/4-1.5/0.25-35	350	35	3000/1500	1.5/0.25	3.2/0.7	400/400	38.5
35/2/4-2.2/0.37-25		25	3000/1500	2.2/0.37	4.5/1	400/400	58.6
35/2/4-1.5/0.25-20		20	3000/1500	1.5/0.25	3.2/0.7	400/400	38.5
35/2/4-1.1/0.18-10		10	3000/1500	1.1/018	2.6/0.5	400/400	33.8
35/2/4-1.1/0.18-5		5	3000/1500	1.1/018	2.6/0.5	400/400	33.8
40/2/4-3/0.55-35	400	35	3000/1500	3/0.55	6.1/1.5	400/400	63.6
40/2/4-4/0.75-30		30	3000/1500	4/0.75	8/1.9	400/400	67.8
40/2/4-4/0.75-25		25	3000/1500	4/0.75	8/1.9	400/400	67.8
40/2/4-2.2/0.37-15		15	3000/1500	2.2/0.37	4.5/1	400/400	64.6
40/2/4-2.2/0.37-10		10	3000/1500	2.2/0.37	4.5/1	400/400	64.6
40/2/4-1.5/0.25-5		5	3000/1500	1.5/0.25	3.2/0.7	400/400	43.5
45/2/4-4/0.75-25	450	25	3000/1500	4/0.75	8/1.9	400/400	69.8
45/2/4-4/0.75-20		20	3000/1500	4/0.75	8/1.9	400/400	69.8
45/2/4-3/0.55-15		15	3000/1500	3/0.55	6.1/1.5	400/400	66.6
45/2/4-2.2/0.37-10		10	3000/1500	2.2/0.37	4.5/1	400/400	66.6
45/2/4-2.2/0.37-5		5	3000/1500	2.2/0.37	4.5/1	400/400	66.6
50/2/4-11/2.7-0	500	0	3000/1500	11/2.7	19.7/5.6	400/400	135
50/2/4-11/2.7-5		5	3000/1500	11/2.7	19.7/5.6	400/400	135
50/2/4-7.5/1.5-10		10	3000/1500	7.5/1.5	14.8/3.7	400/400	102.3
50/2/4-7.5/1.5-15		15	3000/1500	7.5/1.5	14.8/3.7	400/400	102.3
50/2/4-5.5/1.1-20		20	3000/1500	5.5/1.1	11/2.4	400/400	97
50/2/4-5.5/1.1-25		25	3000/1500	5.5/1.1	11/2.4	400/400	97
50/2/4-4/0.75-30		30	3000/1500	4/0.75	8/1.9	400/400	79.8
56/2/4-15/3.7-0	560	0	3000/1500	15/3.7	29/7.2	400/400	159
56/2/4-15/3.7-5		5	3000/1500	15/3.7	29/7.2	400/400	159
56/2/4-11/2.7-10		10	3000/1500	11/2.7	19.7/5.6	400/400	142
56/2/4-11/2.7-15		15	3000/1500	11/2.7	19.7/5.6	400/400	142
56/2/4-7.5/1.5-20		20	3000/1500	7.5/1.5	14.8/3.7	400/400	109.3
56/2/4-5.5/1.1-30		30	3000/1500	5.5/1.1	11/2.4	400/400	104
63/4/8-4/0.75-5	630	5	1500/750	4/0.75	8.8/3.3	400/400	85.1
63/4/8-4/0.75-10		10	1500/750	4/0.75	8.8/3.3	400/400	85.1
63/4/8-3/0.55-15		15	1500/750	3/0.55	6.5/2.55	400/400	77.4
63/4/8-3/0.55-20		20	1500/750	3/0.55	6.5/2.55	400/400	77.4
63/4/8-3/0.55-25		25	1500/750	3/0.55	6.5/2.55	400/400	77.4
63/4/8-2.2/0.37-30		30	1500/750	2.2/0.37	5.1/1.6	400/400	73.9
71/4/8-14/3-0	710	0	1500/750	14.0/3	27/9.5	400/400	198
71/4/8-10/2-5		5	1500/750	10.0/2	19.5/6.5	400/400	181
71/4/8-7.5/1.1-10		10	1500/750	7.5/1.5	15/4.7	400/400	140
71/4/8-7.5/1.1-15		15	1500/750	7.5/1.5	15/4.7	400/400	140
71/4/8-7.5/1.1-20		20	1500/750	7.5/1.5	15/4.7	400/400	140
71/4/8-7.5/1.1-25		25	1500/750	7.5/1.5	15/4.7	400/400	140
71/4/8-5.5/1.1-30		30	1500/750	5.5/1.1	11.1/3.5	400/400	137
80/4/8-16.5/3.3-0	800	0	1500/750	16.5/3.3	31/11.5	400/400	222
80/4/8-16.5/3.3-5		5	1500/750	16.5/3.3	31/11.5	400/400	222
80/4/8-14/3-10		10	1500/750	14.0/3	27/9.5	400/400	207
80/4/8-14/3-15		15	1500/750	14.0/3	27/9.5	400/400	207
80/4/8-14/3-20		20	1500/750	14.0/3	27/9.5	400/400	207
80/4/8-10/2-25		25	1500/750	10.0/2	19.5/6.5	400/400	190
90/4/8-30/6.5-0	900	0	1500/750	30/6.5	61.4/20.5	400/400	366
90/4/8-30/6.5-5		5	1500/750	30/6.5	61.4/20.5	400/400	362
90/4/8-20/4-10		10	1500/750	20.0/4	37/13.5	400/400	286
90/4/8-16.5/3.3-15		15	1500/750	16.5/3.3	31/11.5	400/400	237
90/4/8-16.5/3.3-20		20	1500/750	16.5/3.3	31/11.5	400/400	237
90/4/8-14/3-25		25	1500/750	14.0/3	27/9.5	400/400	222
90/4/8-14/3-30		30	1500/750	14.0/3	27/9.5	400/400	222

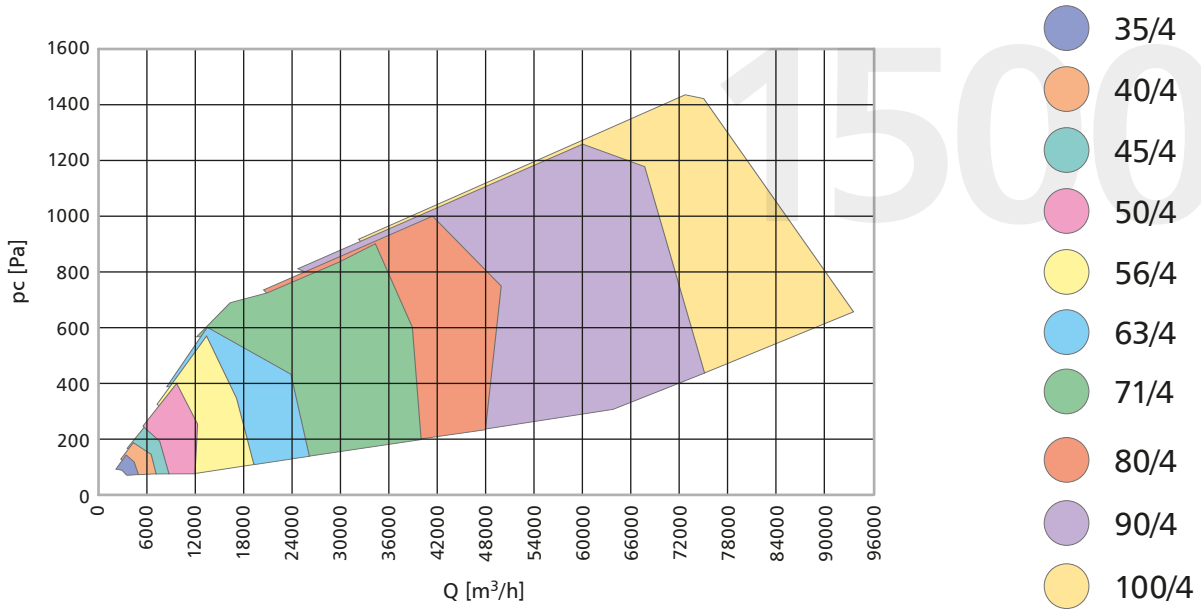
two-speed fans

size	diameter D [mm]	impeller setpoint [°]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	weight m [kg]
100/4/8-40/8-5	1000	5	1500/750	40.0/8	70.9/19.6	400/400	531
100/4/8-30/6.5-10		10	1500/750	30/6.5	61.4/20.5	400/400	396
100/4/8-30/6.5-20		20	1500/750	30/6.5	61.4/20.5	400/400	396
100/4/8-30/6.5-25		25	1500/750	30/6.5	61.4/20.5	400/400	391
100/4/8-20/4-30		30	1500/750	20.0/4	37/13.5	400/400	315
50/4/6-1.5/0.55-0	500	0	1500/1000	1.5/0.55	3.6/1.8	400/400	55.9
50/4/6-15/055-5		5	1500/1000	1.5/0.55	3.6/1.8	400/400	55.9
50/4/6-11/037-10		10	1500/1000	1.1/0.37	2.8/1.4	400/400	53.2
50/4/6-11/037-15		15	1500/1000	1.1/0.37	2.8/1.4	400/400	53.2
50/4/6-075/025-20		20	1500/1000	0.75/0.25	1.9/1	400/400	51.2
50/4/6-075/025-25		25	1500/1000	0.75/0.25	1.9/1	400/400	51.2
50/4/6-055/018-30		30	1500/1000	0.55/0.18	1.5/0.7	400/400	52.8
56/4/6-3/1.1-0	560	0	1500/1000	3/1.1	6.5/3.6	400/400	79.4
56/4/6-3/1.1-5		5	1500/1000	3/1.1	6.5/3.6	400/400	79.4
56/4/6-2.2/0.75-10		10	1500/1000	2.2/0.75	4.9/2.5	400/400	68.9
56/4/6-2.2/0.75-15		15	1500/1000	2.2/0.75	4.9/2.5	400/400	68.9
56/4/6-1.5/0.55-20		20	1500/1000	1.5/0.55	3.6/1.8	400/400	57.9
56/4/6-1.5/0.55-25		25	1500/1000	1.5/0.55	3.6/1.8	400/400	57.9
56/4/6-1.5/0.55-30		30	1500/1000	1.5/0.55	3.6/1.8	400/400	57.9
63/4/6-4/1.5-5	630	5	1500/1000	4/1.5	8.8/4.4	400/400	99.4
63/4/6-4/1.5-10		10	1500/1000	4/1.5	8.8/4.4	400/400	99.4
63/4/6-3/1.1-15		15	1500/1000	3/1.1	6.5/3.6	400/400	84.4
63/4/6-3/1.1-20		20	1500/1000	3/1.1	6.5/3.6	400/400	84.4
63/4/6-3/1.1-25		25	1500/1000	3/1.1	6.5/3.6	400/400	84.4
63/4/6-2.2/0.75-30		30	1500/1000	2.2/0.75	4.9/2.5	400/400	73.9
71/4/6-7.5/2.5-10	710	10	1500/1000	7.5/2.5	14.8/7	400/400	147
71/4/6-7.5/2.5-15		15	1500/1000	7.5/2.5	14.8/7	400/400	147
71/4/6-7.5/2.5-20		20	1500/1000	7.5/2.5	14.8/7	400/400	147
71/4/6-7.5/2.5-25		25	1500/1000	7.5/2.5	14.8/7	400/400	147
71/4/6-5.5/1.8-30		30	1500/1000	5.5/1.8	11.4/5.3	400/400	140

The mcr Monsun fan selection program is available at **www.mercor.com.pl**, in the Architect and Designer Zone.

Q - capacity [m³/h]
pc - total pressure [Pa]

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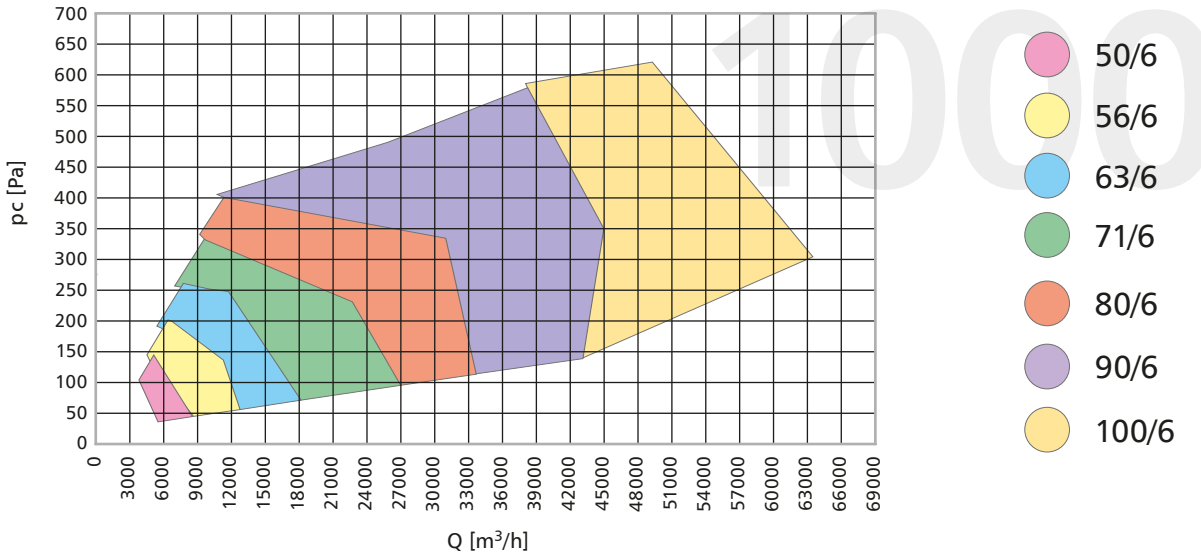
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56/6
63/6
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80/6
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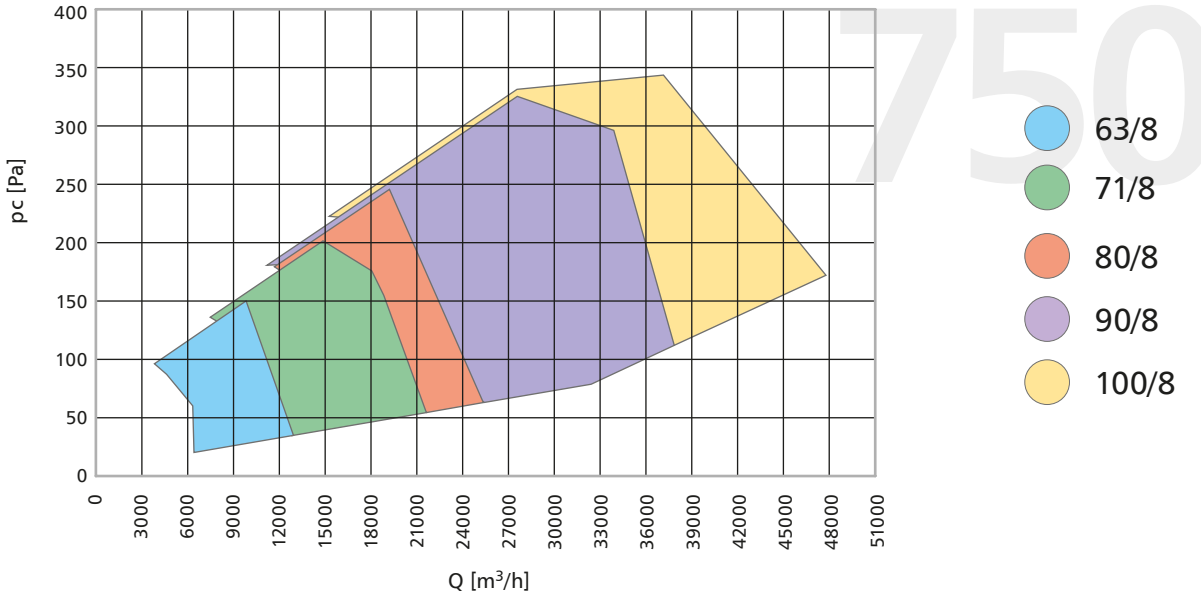
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24000
27000
30000
33000
36000
39000
42000
45000
48000
51000
Q [m³/h]
63/8
71/8
80/8
90/8
100/8

2.4.4. acoustic parameters

size	diameter D [mm]	impeller setpoint [°]	speed [1/min]	power (electric) P [kW]	sound pressure level [dB A] 63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	sound power level Lw(A)* [dB A]
35/4-0.55-35	350	35	1500	0.55	41	51	65	70	72	71	66	57	77
35/4-0.55-25		25		0.55	40	50	65	70	72	70	66	57	76
35/4-0.55-20		20		0.55	39	49	64	69	71	69	65	56	75
35/4-0.55-15		15		0.55	40	50	64	69	71	70	65	56	76
35/4-0.55-10		10		0.55	38	48	62	67	69	68	63	55	74
35/4-0.55-5		5		0.55	36	46	61	66	68	66	62	53	72
35/2-1.5-35	350	35	3000	1.50	57	67	81	86	88	87	82	73	93
35/2-2.2-25		25		2.20	58	68	82	87	89	88	83	74	94
35/2-1.5-20		20		1.50	57	67	81	86	88	87	82	73	93
35/2-1.1-10		10		1.10	56	66	80	85	87	86	81	72	92
35/2-1.1-5		5		1.10	55	64	79	84	86	85	80	71	90
40/4-0.75-35	400	35	1500	0.75	45	55	70	75	77	75	71	62	81
40/4-0.75-30		30		0.75	45	54	69	74	76	75	70	61	81
40/4-0.55-25		25		0.55	45	55	70	75	77	75	71	62	81
40/4-0.55-15		15		0.55	44	54	68	73	75	74	69	61	80
40/4-0.55-10		10		0.55	42	52	67	72	74	72	68	59	78
40/4-0.55-5		5		0.55	41	51	65	70	72	71	66	58	77
40/2-3-35	400	35	3000	3.00	60	70	84	89	91	90	85	76	96
40/2-4-30		30		4.00	61	71	85	90	92	91	86	78	97
40/2-4-25		25		4.00	61	71	86	91	93	91	87	78	97
40/2-2.2-15		15		2.20	59	69	84	89	91	89	85	76	95
40/2-2.2-10		10		2.20	58	67	82	87	89	88	83	74	93
40/2-1.5-5		5		1.50	56	65	80	85	87	86	81	72	91
45/4-1.1-25	450	25	1500	1.10	47	57	72	77	79	77	73	64	83
45/4-0.75-20		20		0.75	47	57	71	76	78	77	72	63	83
45/4-0.75-15		15		0.75	46	56	70	75	77	76	71	63	82
45/4-0.55-10		10		0.55	44	54	69	74	76	74	70	61	80
45/4-0.55-5		5		0.55	43	53	68	73	75	73	69	60	79
45/2-4-25	450	25	3000	4.00	63	73	88	93	95	93	89	80	99
45/2-4-20		20		4.00	62	72	86	91	93	92	87	79	98
45/2-3-15		15		3.00	61	71	86	91	93	91	87	78	97
45/2-2.2-10		10		2.20	60	70	84	89	91	90	85	76	96
45/2-2.2-5		5		2.20	59	68	83	88	90	89	84	75	95
50/6-0.55-0	500	0	1000	0.55	43	53	67	72	74	73	68	60	79
50/6-0.55-5		5		0.55	43	53	67	72	74	73	68	60	79
50/6-0.37-10		10		0.37	43	52	67	72	74	73	68	59	78
50/6-0.37-15		15		0.37	42	52	66	71	73	72	67	59	78
50/6-0.25-20		20		0.25	41	51	65	70	72	71	66	58	77
50/6-0.25-25		25		0.25	40	50	65	70	72	70	66	57	76
50/6-0.25-30		30		0.25	39	49	64	69	71	69	65	56	75
50/4-1.5-0	500	0	1500	1.50	54	64	78	83	85	84	79	71	90
50/4-1.5-5		5		1.50	54	64	78	83	85	84	79	70	90
50/4-1.1-10		10		1.10	53	63	78	83	85	83	79	70	89
50/4-1.1-15		15		1.10	53	62	77	82	84	83	78	69	89
50/4-0.75-20		20		0.75	52	62	76	81	83	82	77	68	88
50/4-0.75-25		25		0.75	51	61	75	80	82	81	76	68	87
50/4-0.55-30		30		0.55	50	59	74	79	81	80	75	66	85
50/2-11-0	500	0	3000	11.00	69	79	93	98	100	99	94	85	105
50/2-11-5		5		11.00	69	79	93	98	100	99	94	86	105
50/2-7.5-10		10		7.50	68	78	93	98	100	98	94	85	104
50/2-7.5-15		15		7.50	68	78	92	97	99	98	93	84	104
50/2-5.5-20		20		5.50	67	77	91	96	98	97	92	83	103
50/2-5.5-25		25		5.50	66	76	91	96	98	96	92	83	102
50/2-4-30		30		4.00	65	75	89	94	96	95	90	82	101

size	diameter D [mm]	impeller setpoint [°]	speed [1/min]	power (electric) P [kW]	sound pressure level [dB A] 63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	sound power level Lw(A)* [dB A]
56/6-1.1-0	560	0	1000	1.10	49	59	73	78	80	79	74	65	85
56/6-1.1-5		5		1.10	48	58	72	77	79	78	73	64	84
56/6-0.75-10		10		0.75	47	57	71	76	78	77	72	64	83
56/6-0.75-15		15		0.75	47	56	71	76	78	77	72	63	82
56/6-0.55-20		20		0.55	44	54	68	73	75	74	69	61	80
56/6-0.55-25		25		0.55	44	54	68	73	75	74	69	60	80
56/6-0..55-30		30		0.55	43	53	67	72	74	73	68	59	79
56/4-3-0	560	0	1500	3.00	59	69	83	88	90	89	84	76	95
56/4-3-5		5		3.00	57	67	82	87	89	87	83	74	93
56/4-2.2-10		10		2.20	56	66	81	86	88	86	82	73	92
56/4-2.2-15		15		2.20	56	66	80	85	87	86	81	72	92
56/4-1.5-20		20		1.50	53	63	77	82	84	83	78	69	89
56/4-1.5-25		25		1.50	53	62	77	82	84	83	78	69	88
56/4-1.5-30		30		1.50	52	61	76	81	83	82	77	68	87
56/2-15-0	560	0	3000	15.00	83	92	107	112	114	113	108	99	118
56/2-15-5		5		15.00	73	82	97	102	104	103	98	89	108
56/2-11-10		10		11.00	72	81	96	101	103	102	97	88	107
56/2-11-15		15		11.00	71	81	95	100	102	101	96	88	107
56/2-7.5-20		20		7.50	68	78	92	97	99	98	93	84	104
56/2-5.5-30		30		5.50	67	76	91	96	98	97	92	83	102
63/4-4-5	630	5	1500	4.00	60	70	85	90	92	90	86	77	96
63/4-4-10		10		4.00	60	69	84	89	91	90	85	76	95
63/4-3-15		15		3.00	59	69	83	88	90	89	84	75	95
63/4-3-20		20		3.00	58	68	82	87	89	88	83	75	94
63/4-3-25		25		3.00	56	66	80	85	87	86	81	73	92
63/4-2.2-30		30		2.20	54	64	78	83	85	84	79	71	90
63/6-1.5-5	630	5	1000	1.50	51	61	75	80	82	81	76	68	87
63/6-1.5-10		10		1.50	51	61	75	80	82	81	76	67	87
63/6-1.1-15		15		1.10	50	60	74	79	81	80	75	67	86
63/6-1.1-20		20		1.10	48	58	73	78	80	78	74	65	84
63/6-0.75-25		25		0.75	47	57	71	76	78	77	72	64	83
63/8-0.55-5	630	5	750	0.55	44	54	69	74	76	74	70	61	80
63/8-0.75-10		10		0.75	44	54	69	74	76	74	70	61	80
63/8-0.55-15		15		0.55	42	52	66	71	73	72	67	59	78
63/8-0.55-20		20		0.55	41	51	65	70	72	71	66	57	77
63/8-0.37-25		25		0.37	40	50	64	69	71	70	65	57	76
63/8-0.25-30		30		0.25	38	48	63	68	70	68	64	55	74
71/4-11-0	710	0	1500	11.00	66	76	90	95	97	96	91	82	102
71/4-11-5		5		11.00	65	75	89	94	96	95	90	82	101
71/4-7.5-10		10		7.50	65	75	89	94	96	95	90	81	101
71/4-7.5-15		15		7.50	64	74	88	93	95	94	89	81	100
71/4-7.5-20		20		7.50	63	73	87	92	94	93	88	80	99
71/4-7.5-25		25		7.50	65	75	89	94	96	95	90	81	101
71/4-5.5-30		30		5.50	59	69	84	89	91	89	85	76	95
71/6-3-0	710	0	1000	3.00	56	66	81	86	88	86	82	73	92
71/6-3-5		5		3.00	56	66	80	85	87	86	81	72	92
71/6-2.2-10		10		2.20	56	65	80	85	87	86	81	72	92
71/6-2.2-15		15		2.20	55	65	79	84	86	85	80	72	91
71/6-1.5-20		20		1.50	54	64	79	84	86	84	80	71	90
71/6-1.5-25		25		1.50	52	62	77	82	84	82	78	69	88
71/6-1.1-30		30		1.10	50	60	75	80	82	80	76	67	86
71/8-1.1-0	710	0	750	1.10	50	60	75	80	82	80	76	67	86
71/8-1.1-5		5		1.10	50	59	74	79	81	80	75	66	86
71/8-0.75-10		10		0.75	49	59	74	79	81	79	75	66	85
71/8-0.75-15		15		0.75	49	59	73	78	80	79	74	66	85
71/8-0.75-20		20		0.75	48	58	72	77	79	78	73	65	84
71/8-0.55-25		25		0.55	46	56	71	76	78	76	72	63	82
71/8-0.55-30		30		0.55	44	54	69	74	76	74	70	61	80

size	diameter D [mm]	impeller setpoint [°]	speed [1/min]	power (electric) P [kW]	sound pressure level [dB A] 63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	sound power level Lw(A)* [dB A]
80/4-15-0	800	0	1500	15.00	68	78	92	97	99	98	93	84	104
80/4-15-5		5		15.00	67	77	91	96	98	97	92	84	103
80/4-11-10		10		11.00	66	76	91	96	98	96	92	83	102
80/4-11-15		15		11.00	66	76	90	95	97	96	91	83	102
80/4-11-20		20		11.00	65	75	89	94	96	95	90	81	101
80/4-11-25		25		11.00	63	73	88	93	95	93	89	80	99
80/4-7.5-30		30		7.50	62	72	86	91	93	92	87	79	98
80/6-5.5-0	800	0	1000	5.50	59	69	83	88	90	89	84	76	95
80/6-4-5		5		4.00	57	67	82	87	89	87	83	74	93
80/6-3-10		10		3.00	57	67	81	86	88	87	82	74	93
80/6-3-15		15		3.00	56	66	80	85	87	86	81	73	92
80/6-2.2-20		20		2.20	55	64	79	84	86	85	80	71	91
80/6-1.5-25		25		1.50	55	64	79	84	86	85	80	71	91
80/8-2.2-0	800	0	750	2.20	53	63	77	82	84	83	78	70	89
80/8-2.2-5		5		2.20	52	62	77	82	84	82	78	69	88
80/8-1.5-10		10		1.50	51	61	76	81	83	81	77	68	87
80/8-1.5-15		15		1.50	51	61	75	80	82	81	76	68	87
80/8-1.1-20		20		1.10	50	60	74	79	81	80	75	66	86
80/8-1.1-25		25		1.10	48	58	73	78	80	78	74	65	84
90/4-30-0	900	0	1500	30.00	73	82	97	102	104	103	98	89	109
90/4-22-5		5		22.00	72	81	96	101	103	102	97	88	107
90/4-18.5-10		10		18.50	70	80	95	100	102	100	96	87	106
90/4-15-15		15		15.00	69	79	93	98	100	99	94	85	105
90/4-15-20		20		15.00	68	77	92	97	99	98	93	84	104
90/4-11-25		25		11.00	66	76	91	96	98	96	92	83	102
90/4-11-30		30		11.00	66	76	90	95	97	96	91	82	102
90/6-11-0	900	0	1000	11.00	64	74	88	93	95	94	89	80	100
90/6-7.5-5		5		7.50	63	73	87	92	94	93	88	79	99
90/6-5.5-10		10		5.50	61	71	86	91	93	91	87	78	97
90/6-5.5-15		15		5.50	60	70	84	89	91	90	85	77	96
90/6-5.5-20		20		5.50	59	69	83	88	90	89	84	75	95
90/6-4-25		25		4.00	58	68	82	87	89	88	83	74	94
90/6-3-30		30		3.00	57	67	81	86	88	87	82	74	93
90/8-4-0	900	0	750	4.00	58	67	82	87	89	88	83	74	94
90/8-3-5		5		3.00	57	66	81	86	88	87	82	73	92
90/8-3-10		10		3.00	55	65	80	85	87	85	81	72	91
90/8-2.2-15		15		2.20	54	64	78	83	85	84	79	70	90
90/8-2.2-20		20		2.20	53	62	77	82	84	83	78	69	88
90/8-1.5-25		25		1.50	51	61	76	81	83	81	77	68	87
90/8-1.5-30		30		1.50	51	61	75	80	82	81	76	67	87
100/4-37-5	1000	5	1500	37.00	75	85	99	104	106	105	100	91	111
100/4-30-10		10		30.00	73	83	97	102	104	103	98	90	109
100/4-30-20		20		30.00	72	82	96	101	103	102	97	88	108
100/4-22-25		25		22.00	70	80	94	99	101	100	95	87	106
100/4-18.5-30		30		18.50	69	78	93	98	100	99	94	85	105
100/6-11-5	1000	5	1000	11.00	65	75	90	95	97	95	91	82	101
100/6-11-10		10		11.00	64	74	89	94	96	94	90	81	100
100/6-7.5-20		20		7.50	63	73	87	92	94	93	88	80	99
100/6-7.5-25		25		7.50	61	71	85	90	92	91	86	78	97
100/6-5.5-30		30		5.50	60	70	84	89	91	90	85	76	96
100/8-5.5-5	1000	5	750	5.50	59	69	84	89	91	89	85	76	95
100/8-4-10		10		4.00	58	68	82	87	89	88	83	75	94
100/8-4-20		20		4.00	57	67	81	86	88	87	82	73	93
100/8-3-25		25		3.00	55	65	79	84	86	85	80	72	91
100/8-2.2-30		30		2.20	54	63	78	83	85	84	79	70	90

*Sound power level Lw(A) was established for the fan's highest efficiency point.

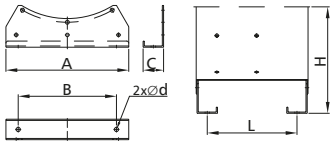
2.5. accessories

2.5.1. mounting feet SW

The mounting feet SW are designed for installing a fan horizontally (the airflow is in parallel to the installation surface). The feet are made of galvanized steel sheet, powder-coated as standard using the same colour as the fan.

The feet attach to the fan's housing flange with M8 or M10 bolts, depending on the fan size. The openings in the lower part of the feet can be used for installation of vibration dampers.

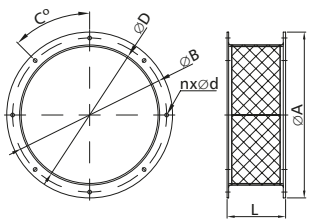
mounting feet SW								
fan	type	A [mm]	B [mm]	C [mm]	d [mm]	H [mm]	L [mm]	m [kg]
mcr Monsun 35	SW-35	305	245	50	12.5	260	344	1.1
mcr Monsun 40	SW-40	300	240	50	12.5	280	444	0.9
mcr Monsun 45	SW-45	320	260	50	12.5	320	444	1.1
mcr Monsun 50	SW-50	400	320	50	12.5	350	544	1.4
mcr Monsun 56	SW-56	450	370	50	12.5	375	644	1.7
mcr Monsun 63	SW-63	500	420	50	12.5	425	544	2.1
mcr Monsun 71	SW-71	550	470	50	12.5	475	694	2.4
mcr Monsun 80	SW-80	650	570	50	12.5	525	694	3.1
mcr Monsun 90	SW-90	700	620	60	12.5	575	834	3.4
mcr Monsun 100	SW-100	780	670	70	12.5	650	924	10.2



2.5.2. flexible connections - vibration absorbers KD

The flexible connection KD is used for eliminating vibrations generated during operation of the fan which might be transmitted to the ventilation system. The connection may also compensate thermal expansion of ducts during the operation of smoke exhaustion system. When mcr Monsun fan is integrated in a ventilation system including suction and pumping side, it should have two flexible connections, one on each side.

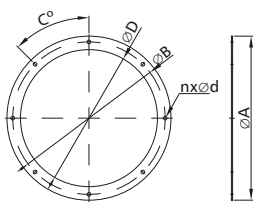
flexible connections KD								
fan	type	D [mm]	~A [mm]	B [mm]	L [mm]	C [°]	nxd [mm]	m [kg]
mcr Monsun 35	KD-35	355	425	395	150	45	8 x 9.6	1.1
mcr Monsun 40	KD-40	400	470	438	150	30	12 x 9.6	1.3
mcr Monsun 45	KD-45	450	520	487	150	30	12 x 9.6	1.4
mcr Monsun 50	KD-50	500	570	541	150	30	12 x 9.6	1.6
mcr Monsun 56	KD-56	560	640	605	150	22.5	16 x 10.5	1.8
mcr Monsun 63	KD-63	630	710	674	200	22.5	16 x 10.5	2.0
mcr Monsun 71	KD-71	710	790	751	200	22.5	16 x 10.5	2.3
mcr Monsun 80	KD-80	800	875	837	200	15	24 x 10.5	2.6
mcr Monsun 90	KD-90	900	975	934	200	15	24 x 10.5	2.9
mcr Monsun 100	KD-100	1000	1080	1043	200	15	24 x 10.5	3.2



2.5.3. counter flanges PK

The counter flange PK is designed for attaching flexible connections KD to mcr Monsun fan and to the ventilation system. It is made of powder-coated steel sheet as standard.

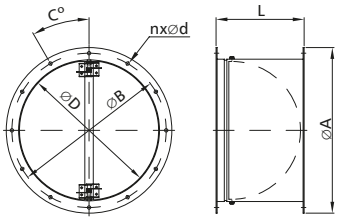
counter flanges PK							
fan	type	D [mm]	~A [mm]	B [mm]	C [°]	nxd [mm]	m [kg]
mcr Monsun 35	PK-35	359	425	395	45	8 x 9.6	0.9
mcr Monsun 40	PK-40	404	470	438	30	12 x 9.6	1.0
mcr Monsun 45	PK-45	454	520	487	30	12 x 9.6	1.2
mcr Monsun 50	PK-50	504	570	541	30	12 x 9.6	1.3
mcr Monsun 56	PK-56	564	640	605	22.5	16 x 10.5	1.6
mcr Monsun 63	PK-63	634	710	674	22.5	16 x 10.5	1.8
mcr Monsun 71	PK-71	716	790	751	22.5	16 x 10.5	2.0
mcr Monsun 80	PK-80	806	875	837	15	24 x 10.5	2.1
mcr Monsun 90	PK-90	906	975	934	15	24 x 10.5	2.2
mcr Monsun 100	PK-100	1006	1080	1043	15	24 x 10.5	2.8



2.5.4. automatic back draft dampers KS, KS-V

The automatic back draft damper prevents outside air from entering the building's interior during the fan's standstill. It significantly lowers heat losses in winter and prevents uncontrolled air circulation. The device's housing is made of powder-painted steel sheet, with the flap itself made of sheet aluminium. The damper is available in two versions: KS for horizontal installation and KS-V for vertical installation.

automatic back draft dampers KS, KS-V								
fan	type	D [mm]	~A [mm]	B [mm]	L [mm]	C [°]	nxd [mm]	m [kg]
mcr Monsun 35	KS[V]-35	355	425	395	240	45	8 x 9.6	6.6
mcr Monsun 40	KS[V]-40	400	470	438	250	30	12 x 9.6	7.6
mcr Monsun 45	KS[V]-45	450	520	487	290	30	12 x 9.6	9.5
mcr Monsun 50	KS[V]-50	500	570	541	320	30	12 x 9.6	11.3
mcr Monsun 56	KS[V]-56	560	640	605	350	22.5	16 x 10.5	14.0
mcr Monsun 63	KS[V]-63	630	710	674	360	22.5	16 x 10.5	16.2
mcr Monsun 71	KS[V]-71	710	790	751	430	22.5	16 x 10.5	20.8
mcr Monsun 80	KS[V]-80	800	875	837	470	15	24 x 10.5	24.8
mcr Monsun 90	KS[V]-90	900	975	934	540	15	24 x 10.5	30.9
mcr Monsun 100	KS[V]-100	1000	1080	1043	580	15	24 x 10.5	37.4

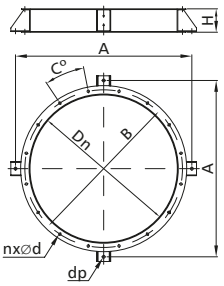


2.5.5. vertical supports PP

The vertical supports PP are designed for installing the fan in vertical position (the airflow is perpendicular to the installation surface). The supports are made of galvanized steel sheet, powder-coated as standard using the same colour as the fan.

The supports attach to the fan's housing flange with M8 or M10 bolts, depending on the equipment size. There are four holders on the support's diameter for screwing in shock absorbers. The complete unit is installed on a base prepared before.

vertical supports PP									
fan	type	Dn [mm]	dp [mm]	A [mm]	H [mm]	B [mm]	C [°]	nxd [mm]	m [kg]
mcr Monsun 35	PP-35	355	12.2	479	50	395	45	8 x 9.6	5.4
mcr Monsun 40	PP-40	400	12.2	524	50	438	30	12 x 9.6	5.8
mcr Monsun 45	PP-45	450	12.2	574	50	487	30	12 x 9.6	6.3
mcr Monsun 50	PP-50	500	12.2	624	50	541	30	12 x 9.6	6.8
mcr Monsun 56	PP-56	560	12.2	684	50	605	22.5	16 x 10.5	7.8
mcr Monsun 63	PP-63	630	12.2	754	100	674	22.5	16 x 10.5	9.1
mcr Monsun 71	PP-71	710	12.2	836	100	751	22.5	16 x 10.5	11.6
mcr Monsun 80	PP-80	800	12.2	926	100	837	15	24 x 10.5	12.4
mcr Monsun 90	PP-90	900	12.2	1026	100	934	15	24 x 10.5	13.3
mcr Monsun 100	PP-100	1000	12.2	1126	100	1043	15	24 x 10.5	15.2

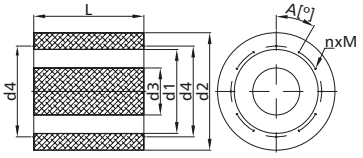


2.5.6. noise silencers TH/R

The noise silencer TH/R is designed to reduce the noise generated during fan operation in the ventilation system. The silencer's housing is made of galvanised steel sheet with core and internal part made of perforated zinc coated sheet; high-temperature wool with increased sound absorbing characteristics is used for damping.

The threaded holes in the silencer allow direct fastening on the fan housing flange. If using this installation method, seal the joint with high-temperature silicone.

noise silencers TH/R									
fan	type	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	A [°]	nxM	m [kg]
mcr Monsun 35	TH/R-35	359	550	200	395	950	45	8 x M8	41
mcr Monsun 40	TH/R-40	404	600	220	438	950	30	12 x M8	53
mcr Monsun 45	TH/R-45	454	650	250	487	950	30	12 x M8	56
mcr Monsun 50	TH/R-50	504	700	280	541	950	30	12 x M8	62
mcr Monsun 56	TH/R-56	564	760	315	605	950	22.5	16 x M8	69
mcr Monsun 63	TH/R-63	634	830	355	674	950	22.5	16 x M8	78
mcr Monsun 71	TH/R-71	716	960	400	751	1400	22.5	16 x M8	122
mcr Monsun 80	TH/R-80	806	1050	450	837	1400	15	24 x M10	138
mcr Monsun 90	TH/R-90	906	1150	500	934	1400	15	24 x M10	155
mcr Monsun 100	TH/R-100	1006	1250	560	1043	1400	15	24 x M10	170

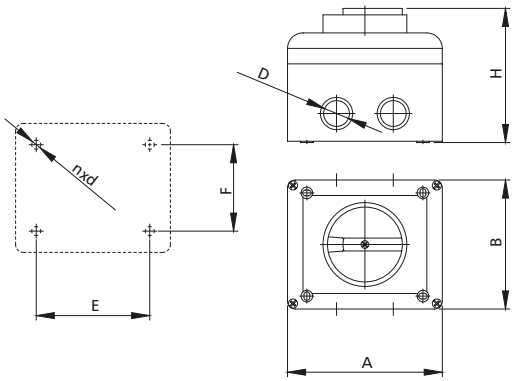


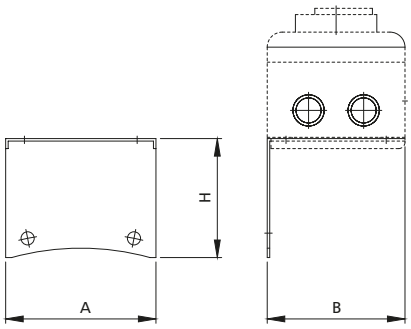
2.5.7. service switches WS

The service switch WS is designed for cutting off power from fan for the period of servicing. The switch has an extra auxiliary contact for signaling the cut-off position in case of not returning the switch to original position, i.e. power supply to fan active after service inspection. For installation directly on the fan's housing, use special support bracket WW.

The 3-pole service switch is designed for one-speed 230/400 YV motors and the 6-pole switch for one- and two-speed motors rated at 400/690 D/YV and two-speed motors rated at 230/400 YV.

service switches WS										
type	A [mm]	B [mm]	E [mm]	F [mm]	H [mm]	nxd [mm]	U [V]	I [A]	glands D [mm]	comments
WS-16/3	90	90	67	48	95	4x4	690	16	M20[x4]	3-pole
WS-16/6	90	90	67	48	95	4x4	690	16	M20[x4]	3-pole
WS-32/6	116	100	90	52	108	4x4	690	32	M25[x4]	6-pole
WS-63/6	170	155	105	95	185	4x6	690	63	M25/M32[x4]	6-pole
WS-100/6	200	180	130	125	200	4x6	690	100	M32/M40[x4]	6-pole



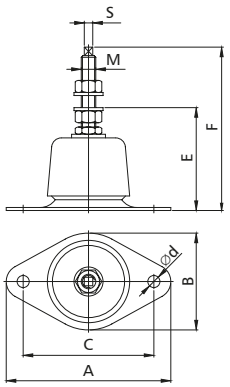


service switch console WW			
type	A [mm]	B [mm]	H [mm]
WW-16	90	90	~100
WW-32	116	100	
WW-63	170	155	
WS-100	200	180	

2.5.8. shock absorbers AM/BM

The shock absorbers AM/BM reduce vibrations generated during operation of the fan by limiting the vibration transferring to the floor. When a fan is placed correctly on the shock absorbers installed in the feet it works more silently and is more stable.

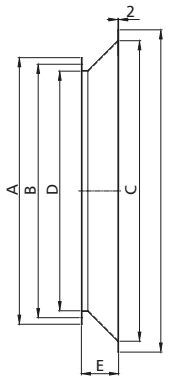
shock absorbers AM/BM										
fan	type	A [mm]	B [mm]	C [mm]	E [mm]	F [mm]	M	S [mm]	d [mm]	m [kg]
mcr Monsun 35	**AM-35**	136	80	108	85	135	M12	7	10	0.6
mcr Monsun 40	**AM-40**									
mcr Monsun 45	**AM-45**									
mcr Monsun 50	**AM-50**									
mcr Monsun 56	**AM-56**									
mcr Monsun 63	**AM-63**									
mcr Monsun 71	**AM-71**									
mcr Monsun 80	**AM-80**									
mcr Monsun 90	**AM-90**									
mcr Monsun 100	**AM-100**									



2.5.9. inlet nozzles with grills DS

The inlet nozzle DS is designed for reducing hydraulic resistance and noise in case of fan operation without suction part - slow suction. It is made of galvanized steel sheet, powder-coated. This part is directly screwed onto the mcr Monsun's fan.

inlet nozzles DS							
fan	type	D [mm]	A [mm]	~C [mm]	B [mm]	nxd [mm]	E [mm]
mcr Monsun 35	DS-35	355	425	502	395	8x10 [every 45 °]	93
mcr Monsun 40	DS-40	400	470	547	438	12x10 [every 30 °]	93
mcr Monsun 45	DS-45	450	520	597	487	12x10 [every 30 °]	93
mcr Monsun 50	DS-50	500	570	647	541	12x10 [every 30 °]	93
mcr Monsun 56	DS-56	560	640	716	605	16x11 [every 22.5 °]	98
mcr Monsun 63	DS-63	630	710	806	674	16x11 [every 22.5 °]	108
mcr Monsun 71	DS-71	710	790	890	751	16x11 [every 22.5 °]	110
mcr Monsun 80	DS-80	800	875	907	837	24x11 [every 15 °]	112
mcr Monsun 90	DS-90	900	975	1009	934	24x11 [every 15 °]	114
mcr Monsun 100	DS-100	1000	1080	1109	1043	24x11 [every 15 °]	114

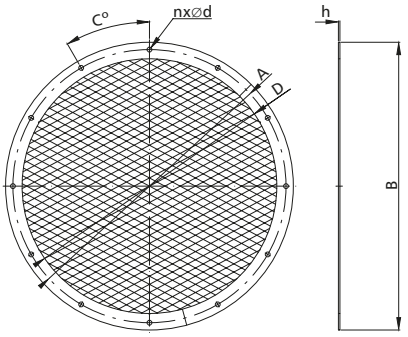


The cover grills SO have 80% clearance.

2.5.10. cover grills SO

The cover grills SO are made of galvanized steel sheet and galvanized wire mesh. Powder-coated as standard, or galvanized on custom order. The fitting protects the fan against foreign bodies. The product is designed for direct mounting on the fan's casing flange with free-flow suction and forcing.

cover grills SO								
fan	type	D [mm]	A [mm]	B [mm]	h [mm]	C [mm]	nxd [mm]	m [kg]
mcr Monsun 35	SO-35	355	395	425	5	45	8x9.6	1.2
mcr Monsun 40	SO-40	400	438	470	5	30	12x9.6	1.3
mcr Monsun 45	SO-45	450	487	520	5	30	12x9.6	1.5
mcr Monsun 50	SO-50	500	541	570	5	30	12x9.6	1.7
mcr Monsun 56	SO-56	560	605	640	5	22.5	16x10.5	2.2
mcr Monsun 63	SO-63	630	674	710	5	22.5	16x10.5	2.5
mcr Monsun 71	SO-71	710	751	790	5	22.5	16x10.5	2.9
mcr Monsun 80	SO-80	800	837	875	5	15	24x10.5	3.1
mcr Monsun 90	SO-90	900	934	975	5	15	24x10.5	3.5
mcr Monsun 100	SO-100	1000	1043	1080	5	15	24x10.5	4.4

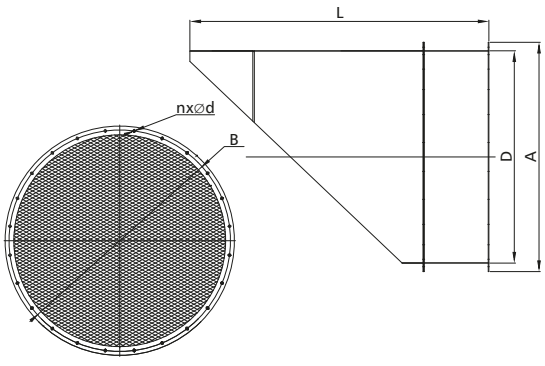


The cover grills SO have 80% clearance.

2.5.11. outlet fittings with grills WO

Outlet fitting with grill WO is made of galvanized steel sheet. It equalizes the air jet at the fan outlet.

outlet fittings with grills WO						
fan	type	D [mm]	A [mm]	B [mm]	nxd [mm]	L [mm]
mcr Monsun 35	DWS-35	355	425	395	8x10 [every 45°]	1D-3D
mcr Monsun 40	DWS-40	400	470	438	12x10 [every 30°]	1D-3D
mcr Monsun 45	DWS-45	450	520	487	12x10 [every 30°]	1D-3D
mcr Monsun 50	DWS-50	500	570	541	12x10 [every 30°]	1D-3D
mcr Monsun 56	DWS-56	560	640	605	16x11 [every 22.5°]	1D-3D
mcr Monsun 63	DWS-63	630	710	674	16x11 [every 22.5°]	1D-3D
mcr Monsun 71	DWS-71	710	790	751	16x11 [every 22.5°]	1D-3D
mcr Monsun 80	DWS-80	800	875	837	24x11 [every 15°]	1D-3D
mcr Monsun 90	DWS-90	900	975	934	24x11 [every 15°]	1D-3D
mcr Monsun 100	DWS-100	1000	1080	1043	24x11 [every 15°]	1D-3D

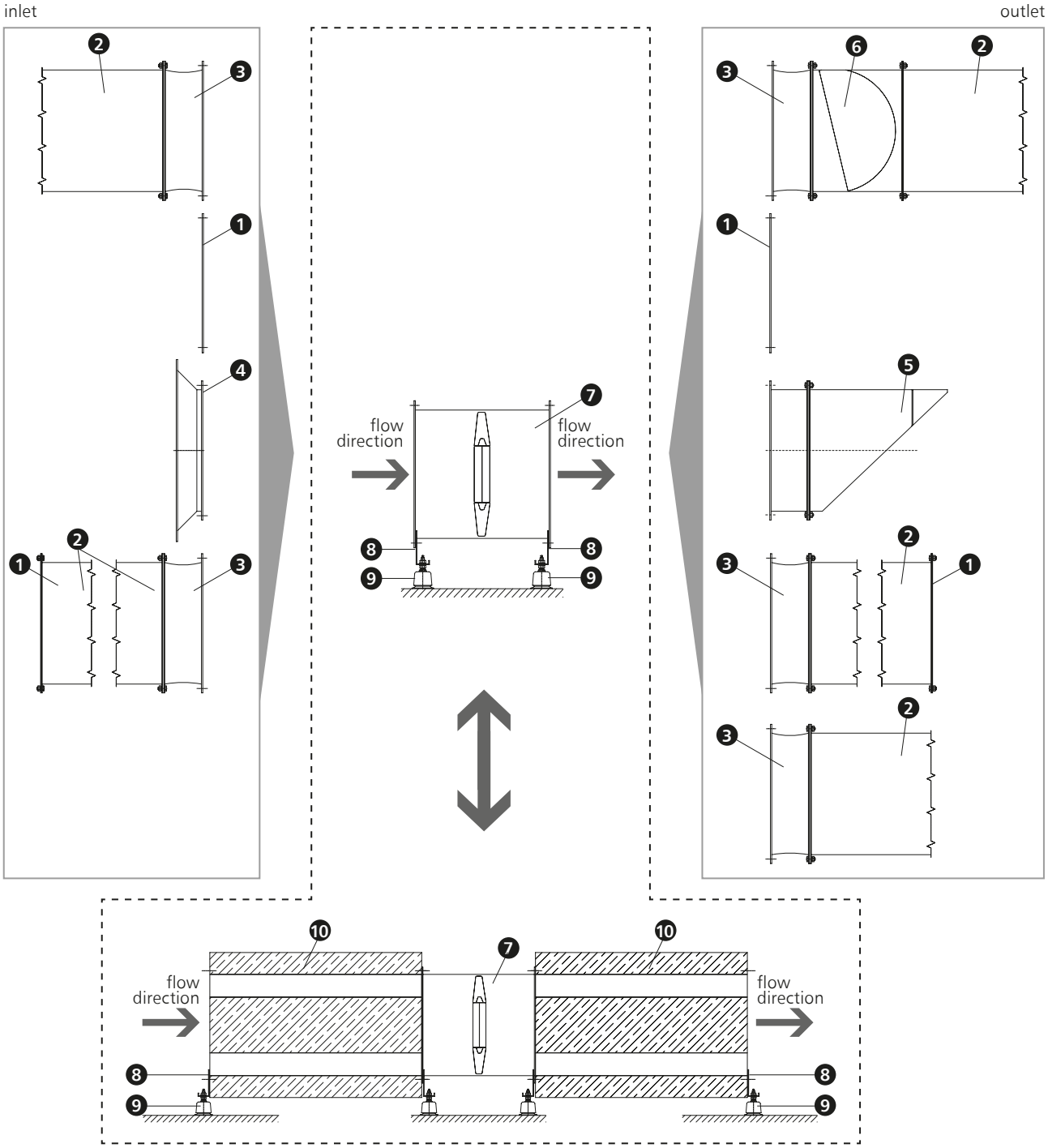


The cover grills SO have 80% clearance.

2.6. installation

The fan may work in horizontal or vertical position, both indoors and outdoors. It may act as exhaust fan (smoke exhaust) or supply fan depending on the installation type.

2.6.1. sample of fan installation variants in horizontal position

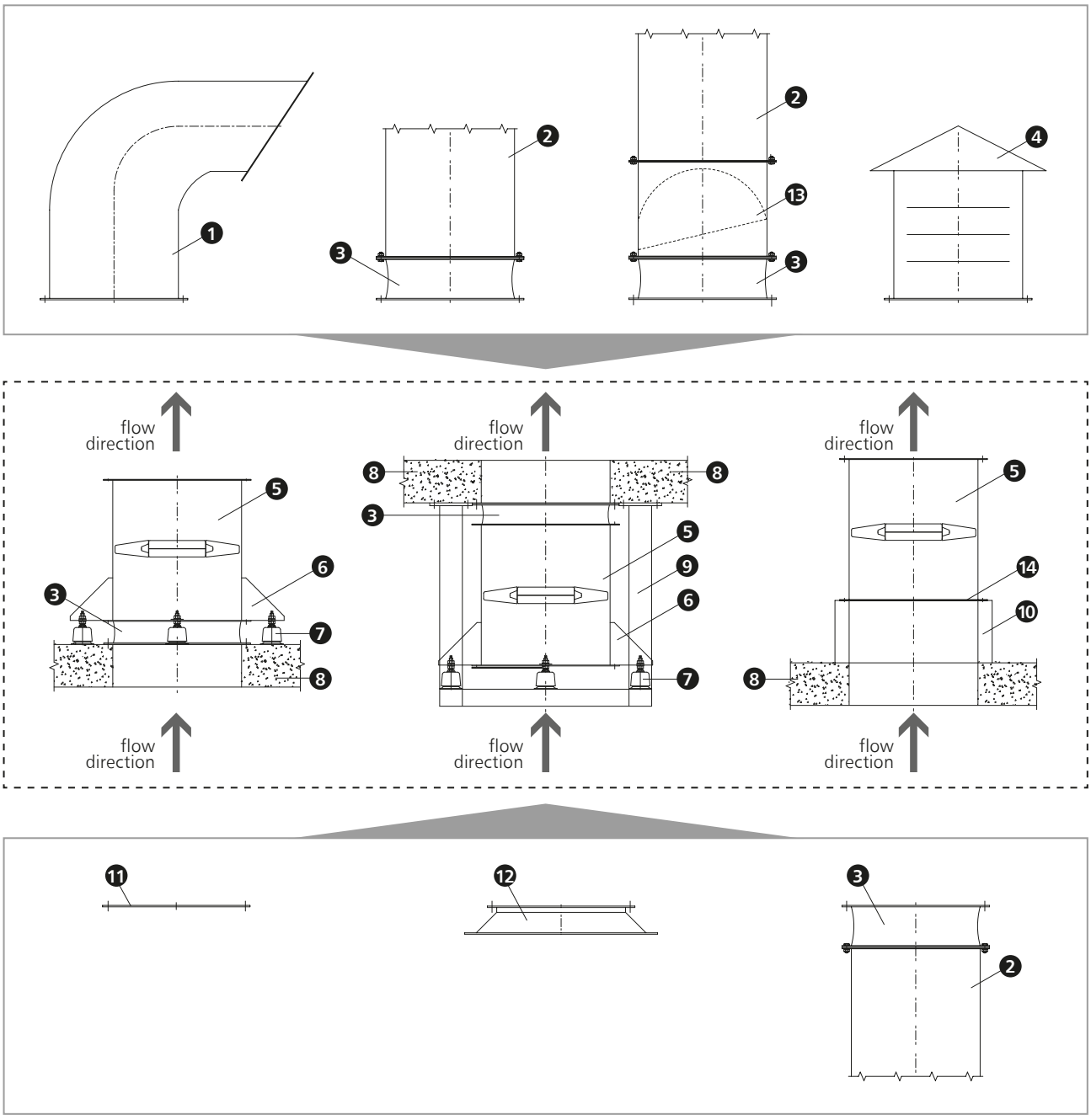


As an option, noise silencers may be installed on the fans (on one or on both sides) and the rest of the equipment as shown in diagram. The fans may be also coupled in a row.

1 - cover grill SO
2 - ventilation system (duct)
3 - flexible connection KD with counter flange PK
4 - inlet nozzle DS
5 - outlet fitting WO
6 - back draft damper KS
7 - mcr Monsun fan
8 - mounting foot SW
9 - shock absorber AM
10 - noise silencer TH/R

2.6.2. sample of fan installation variants in vertical position

for outlet

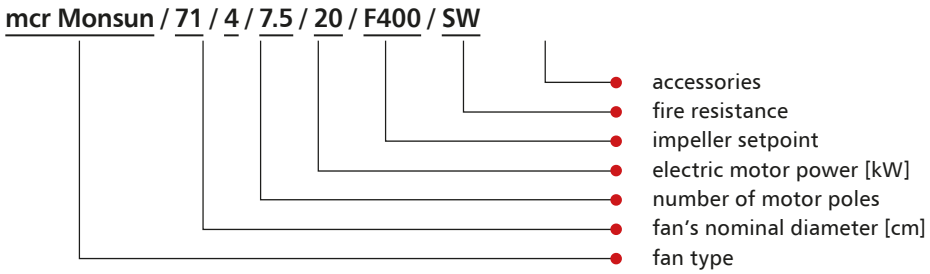


for inlet

As an option, noise silencers may be installed on the fans (on one or on both sides) and the rest of the equipment as shown in diagram. The fans may be also coupled in a row.

1 - outlet connection with grill (not included)
2 - ventilation system (duct; not included)
3 - flexible connection KD with counter flange PK
4 - roof outlet hood (not included)
5 - mcr Monsun fan
6 - vertical support PP
7 - shock absorber AM
8 - ceiling
9 - support structure (not included)
10 - roof base/pedestal (not included)
11 - cover grill SO
12 - inlet nozzle DS
13 - back draft damper KS-V
14 - seal or damping mat (not included)

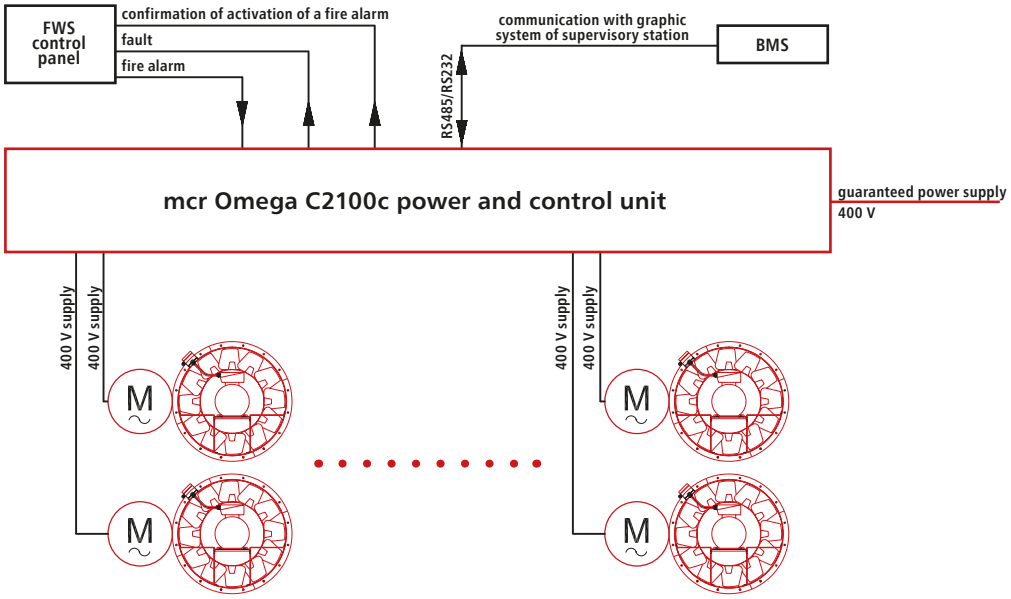
2.7. designation



2.8. 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 Monsun fans using mcr Omega unit:



CE 0370-CPR-1843

CE 0370-CPR-1844

Applus

- **Certificate of constancy of performance 0370-CPR-1843 for F400 and 0370-CPR-1844 for F300.**
- **Functional properties according to EN 12101-3:2002+AC:2005.**
- **Reverse operation possible.**
- **For vertical and horizontal installation.**
- **Available in ATEX explosion-proof version.**

3.1. use

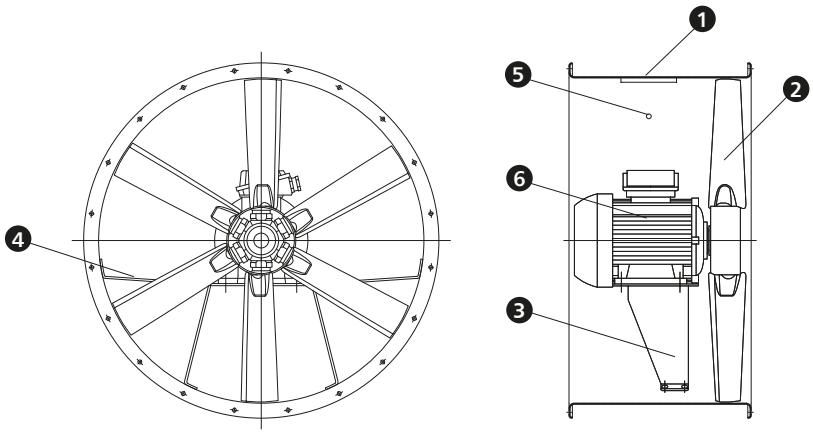
mcr Monsun R axial fans are designed for fire ventilation systems for smoke exhaust and air supply, where reversed operation and explosion-proof design are required, and also for comfort ventilation systems as intake or exhaust fans.

The smoke exhaust fans are designed for removing heat, smoke and combustion gases generated in rooms during fire. They facilitate evacuation of people from area on fire and fire fighting procedures by fire brigades. They also protect the building's structure and equipment against effects of high temperatures and stop fire from spreading to adjacent areas.

The devices can be used indoors and outdoors. The smoke exhaust fans are most often used in civic buildings, shopping malls, boarding houses and industrial halls.

The mcr Monsun R fans can feature two-speed motors and combine comfort ventilation and smoke exhaust functions, e.g. both for ventilation and smoke exhaust in underground garages.

3.2. design



1. fan housing
2. axial impeller
3. motor base support
4. motor base
5. electric gland
6. electric motor, fire resistant at the specific temperature class

The fan's housing is made of steel sheet from 2 mm to 6 mm thick depending on the fan size, hot galvanized and powder-coated, cylindrically shaped, with connection flanges for fire/comfort ventilation system. The mcr Monsun's standard version has short housing. The mcr Monsun R/CL fan has long housing and an inspection hatch which permits verification of the impeller sense of rotation.

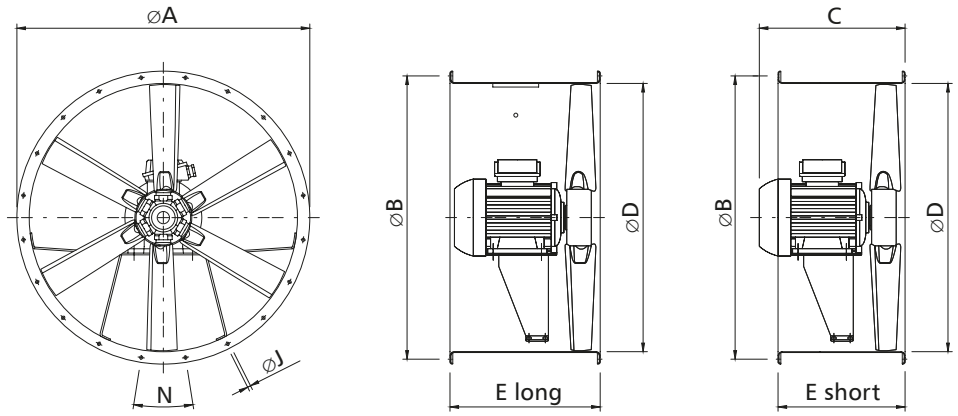
The motor is located and supported by the motor base inside the housing. The impeller with 3, 6 or 9 blades is placed directly on the motor's pirot.

The fan may be equipped with a motor one- or two-speed with different rotational speeds (3000, 1500, 1000, 750 rpm), set on a support fixed to the fan's housing. The motor features insulation class H for continuous operation (S1) and emergency operation (S2). The mechanical protection class is IP 55. The motor's winding is available in two versions: 230/400 V and 400/690 V. 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 supply cables are connected directly to motor. The motor is designed for operation with an inverter.

3.3. dimensions

Depending on the output or installation location the axial fan mcr Monsun R is available in different housing sizes from D 400 to D 1250 for F400 and from D 400 to D 1600 for F300.

type	ØA [mm]	ØB [mm]	C [mm] - depends on the motor size															ØD [mm]	E [mm] housing		ØJ [mm]	N
			80	90S	90L	100	112	132S	132M	160M	160L	180M	180L	200L	225	250	280		long	short		
mcr Monsun R 40	490	450	348	364	389	-	-	-	-	-	-	-	-	-	-	-	-	410	400	250	12	8x45'
mcr Monsun R 45	540	500	348	364	389	-	-	-	-	-	-	-	-	-	-	-	-	460	400	250	12	8x45'
mcr Monsun R 50	600	560	339	364	389	-	-	-	-	-	-	-	-	-	-	-	-	514	400	250	12	12x30'
mcr Monsun R 50	600	560	-	-	-	419	438	-	-	-	-	-	-	-	-	-	-	514	500	250	12	12x30'
mcr Monsun R 56	660	620	275	364	389	-	-	-	-	-	-	-	-	-	-	-	-	560	400	250	12	12x30'
mcr Monsun R 56	660	620	-	-	-	416	432	480	518	-	-	-	-	-	-	-	-	560	500	250	12	12x30'
mcr Monsun R 56	660	620	-	-	-	-	-	-	-	620	-	-	-	-	-	-	-	560	650	250	12	12x30'
mcr Monsun R 63	730	690	339	359	389	-	-	-	-	-	-	-	-	-	-	-	-	640	400	250	12	12x30'
mcr Monsun R 63	730	690	-	-	-	420	437	-	-	-	-	-	-	-	-	-	-	640	500	250	12	12x30'
mcr Monsun R 63	730	690	-	-	-	-	-	539	577	-	-	-	-	-	-	-	-	640	650	250	12	12x30'
mcr Monsun R 63	730	690	-	-	-	-	-	-	-	630	674	-	-	-	-	-	-	640	650	350	12	12x30'
mcr Monsun R 71	810	770	366	379	404	-	-	-	-	-	-	-	-	-	-	-	-	710	430	300	12	16x22'30'
mcr Monsun R 71	810	770	-	-	-	438	433	-	-	-	-	-	-	-	-	-	-	710	500	300	12	16x22'30'
mcr Monsun R 80	900	860	-	-	422	456	472	-	-	-	-	-	-	-	-	-	-	800	500	300	12	16x22'30'
mcr Monsun R 80	900	860	-	-	-	-	-	515	-	-	-	-	-	-	-	-	-	800	600	300	12	16x22'30'
mcr Monsun R 90	1015	970	-	-	-	466	482	525	565	-	-	-	-	-	-	-	-	900	600	350	15	16x22'30'
mcr Monsun R 100	1115	1070	-	-	-	-	482	525	565	-	-	-	-	-	-	-	-	1000	600	350	15	16x22'30'
mcr Monsun R 100	1115	1070	-	-	-	-	-	-	-	695	695	-	-	-	-	-	-	1000	700	450	15	16x22'30'
mcr Monsun R 125	1365	1320	-	-	-	-	-	561	601	-	-	-	-	-	-	-	-	1250	700	500	15	20x18'
mcr Monsun R 125	1365	1320	-	-	-	-	-	-	-	695	695	-	-	-	-	-	-	1250	700	500	15	20x18'
mcr Monsun R 125	1365	1320	-	-	-	-	-	-	-	-	-	740	740	860	-	-	-	1250	900	500	15	20x18'
mcr Monsun R 125	1365	1320	-	-	-	-	-	-	-	-	-	-	-	-	907	-	-	1250	1000	500	15	20x18'
mcr Monsun R 125	1365	1320	-	-	-	-	-	-	-	-	-	-	-	-	-	987	-	1250	1000	600	15	20x18'
mcr Monsun R 125	1365	1320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1077	1250	1200	600	15	20x18'
mcr Monsun R 140	1515	1470	-	-	-	-	-	-	570	-	-	-	-	-	-	-	-	1400	650	400	15	20x18'
mcr Monsun R 140	1515	1470	-	-	-	-	-	-	-	-	700	-	-	-	-	-	-	1400	700	450	15	20x18'
mcr Monsun R 140	1515	1470	-	-	-	-	-	-	-	-	-	-	765	-	-	-	-	1400	900	550	15	20x18'
mcr Monsun R 140	1515	1470	-	-	-	-	-	-	-	-	-	-	-	825	-	-	-	1400	900	550	15	20x18'
mcr Monsun R 140	1515	1470	-	-	-	-	-	-	-	-	-	-	-	-	910	-	-	1400	1000	550	15	20x18'
mcr Monsun R 140	1515	1470	-	-	-	-	-	-	-	-	-	-	-	-	-	985	-	1400	1000	600	15	20x18'
mcr Monsun R 160	1735	1680	-	-	-	-	-	-	570	-	-	-	-	-	-	-	-	1600	650	400	19	24x15'
mcr Monsun R 160	1735	1680	-	-	-	-	-	-	-	-	700	-	-	-	-	-	-	1600	700	450	19	24x15'
mcr Monsun R 160	1735	1680	-	-	-	-	-	-	-	-	-	-	765	-	-	-	-	1600	900	550	19	24x15'
mcr Monsun R 160	1735	1680	-	-	-	-	-	-	-	-	-	-	-	825	-	-	-	1600	1000	550	19	24x15'
mcr Monsun R 160	1735	1680	-	-	-	-	-	-	-	-	-	-	-	-	910	-	-	1600	1000	550	19	24x15'
mcr Monsun R 160	1735	1680	-	-	-	-	-	-	-	-	-	-	-	-	-	985	-	1600	1000	600	19	24x15'
mcr Monsun R 160	1735	1680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1190	1600	1000	700	19	24x15'



Motor size depending on power (one-speed)

speed	motor power [KM]																	
r/min	0.75	1	1.5	2	3	4	5.5	7.5	10	15	20	25	30	40	50	60	75	100
2T (3000)	80	80	80	90S	90L	100LB	112M	132S	132S	160M	160M	180M	180L	200L	225S/M	225S/M	250S/M	250S/M
4T (1500)	90S	90S	90S	90L	100L	100LB	112M	132S	132M	160M	160L	180M	180L	200L	225S/M	225S/M	250S/M	250S/M
6T (1000)	90S	90S	90L	100L	112M	132S	132MA	132MB	100M	160L	160L	200MLA	200MLB	225SMB	250S/M	280S/M	280S/M	-
8T (750)	90L	100LA	100L	112M	132S	132M	100MA	160M	160L	180L	200MLA	225SMA	225SMB	S50SMA	S80S/M	280S/M	-	-

Motor size depending on power (two-speed)

speed	motor power [KM]																					
r/min	0.75	1	1.5	2	3	4	5.5	6	7.5	8	9	10	12	15	18	20	22	24	27	37	38	40
2/4 (3000/1500)	-	-	90S	90S	90L	100L	-	112M	-	-	132M	-	160M	-	160M	-	160L	-	-	-	-	-
4/8 (1500/750)	-	-	90S	100L	100LA	100LC	132S	-	132S	132S	-	132M	-	160M	-	160L	180M	180M	180L	200MLA	200L	225S/M
6/12 (1000/500)	90L	100L	100LB	112M	112M	132MC	160M	160M	160LB	160LB	-	160LB	-	200MLC	160L	200M	-	250SMB	225S/M	-	225S/M	-

3.4. technical parameters

3.4.1. motor power

Range of motor power depending on the size of fan and rotational speeds of the impeller.

motor speed n = 750 [rpm]		motor speed n = 1000 [rpm]		motor speed n = 1500 [rpm]		motor speed n = 3000 [rpm]	
size	power range P [kW]	size	power range P [kW]	size	power range P [kW]	size	power range P [kW]
80	0.55-0.75	**40**	0.55	**40**	0.55	**40**	1.1-1.5
90	0.75-2.2	**45**	0.55	**45**	0.55	**45**	1.5-2.2
100	1.5-3	**50**	0.55	**50**	0.75	**50**	2-4.5
140	2.2-15	**56**	0.55	**56**	0.75-1.5	**56**	4-9
160	3-30	**63**	0.55-0.75	**63**	0.75-3	**63**	9-16
		71	0.75-1.1	**71**	1.1-3		
		80	1.1-2.2	**80**	2.2-4		
		90	1.5-3	**90**	3-7.5		
		100	2.2-4	**100**	5.5-15		
		125	3-17.5	**125**	7.5-37		
		140	4-37				
		160	7.5-55				

3.4.2. fire resistance

In accordance with EN 12101-3 mcr Monsun R fan is certified for the following fire resistance:
- class **F400** – fire resistance 400°C/120 min.
- class **F300** – fire resistance 300°C/60 min.

3.4.3. technical and flow parameters

The working parameters of mcr Monsun R fan cover the range from 1000 m³/h for 210000 m³/h at pressure up to 1200 Pa.

one-speed fans

size	diameter D [mm]	acoustic pressure [dB A]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	fan weight m	
							long housing [kg]	short housing [kg]
40-6T-0.75	410	53	960	0.55	2.4	230/400 Y	37	34
40-4T-0.75		64	1410	0.55	1.6	230/400 Y	32	29
40-2T-1.5		76	2880	1.1	2.7	230/400 Y	33	31
40-2T-2		77	2880	1.5	3.4	230/400 Y	35	33
45-6T-0.75	460	55	960	0.55	2.4	230/400 Y	38	35
45-4T-0.75		68	1410	0.55	1.6	230/400 Y	34	30
45-2T-2		78	2880	1.5	3.4	230/400 Y	38	34
45-2T-3		80	2900	2.2	5.0	230/400 Y	39	36
50-6T-0.75	514	57	960	0.55	2.4	230/400 Y	40	36
50-4T-1		69	1415	0.75	2.0	230/400 Y	37	33
50-2T-4		82	2880	3	6.5	230/400 Y	49	42
50-2T-5.5		83	2890	4	9.3	400 /690 D	65	57
56-6T-0.75	560	62	960	0.55	2.4	230/400 Y	44	39
56-4T-1		73	1430	0.75	2.0	230/400 Y	45	40
56-4T-1.5		74	1430	1.1	2.8	230/400 Y	44	40
56-4T-2		75	1420	1.5	3.6	230/400 Y	48	43
56-2T-5.5		88	2920	4	9.5	400 /690 D	69	60
56-2T-12		89	2950	9	19.2	400 /690 D	147	139
63-6T-0.75	640	65	960	0.55	2.4	230/400 Y	51	45
63-6T-1		66	950	0.75	2.7	230/400 Y	54	48
63-4T-1		73	1430	0.75	2.0	230/400 Y	49	43
63-4T-1.5		74	1430	1.1	2.8	230/400 Y	51	45
63-4T-2		75	1420	1.5	3.6	230/400 Y	55	49
63-4T-3		76	1430	2.2	5.2	230/400 Y	64	54
63-4T-4		77	1430	3	6.6	230/400 Y	73	63
63-2T-12		90	2950	9	19.2	400 /690 D	161	143
63-2T-22		91	2960	16	32.3	230/400 Y	188	170
71-6T-0.75	710	67	960	0.55	2.4	230/400 Y	57	52
71-6T-1		68	950	0.75	2.7	230/400 Y	61	55
71-6T-1.5		69	940	1.1	3.2	230/400 Y	69	61
71-4T-1.5		78	1430	1.1	2.8	230/400 Y	58	52
71-4T-2		79	1420	1.5	3.6	230/400 Y	61	56
71-4T-3		81	1430	2.2	5.2	230/400 Y	70	61
71-4T-4		82	1430	3	6.6	230/400 Y	79	70
80-8T-0.75	800	70	700	0.55	2.1	230/400 Y	71	62
80-8T-1		71	710	0.75	2.8	230/400 Y	78	69
80-6T-1.5		72	940	1.1	3.2	230/400 Y	78	69
80-6T-2		73	945	1.5	4.3	230/400 Y	87	78
80-6T-3		74	935	2.2	5.5	230/400 Y	94	84
80-4T-3		82	1430	2.2	5.2	230/400 Y	79	69
80-4T-4		83	1430	3	6.6	230/400 Y	88	78
80-4T-5.5		84	1435	4	8.4	400 /690 D	94	85
90-8T-1	900	71	710	0.75	2.8	230/400 Y	100	84
90-8T-2		73	710	1.5	4.5	230/400 Y	116	99
90-8T-3		74	710	2.2	6.6	230/400 Y	134	116
90-6T-2		77	945	1.5	4.3	230/400 Y	110	92
90-6T-3		78	935	2.2	5.5	230/400 Y	116	99
90-6T-4		79	970	3	7.8	230/400 Y	142	124
90-4T-4		87	1430	3	6.6	230/400 Y	110	93
90-4T-5.5		89	1435	4	8.4	400/690 D/Y	117	99
90-4T-7.5		91	1460	5.5	12.6	400/690 D/Y	143	126
90-4T-10		92	1460	7.5	17.7	400/690 D/Y	154	137

one-speed fans

size	diameter D [mm]	acoustic pressure [dB A]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	fan weight m	
							long housing [kg]	short housing [kg]
100-8T-2	1000	77	710	1.5	4.5	230/400 Y	124	105
100-8T-3		77	710	2.2	6.6	230/400 Y	142	122
100-8T-4		78	710	3	9.0	230/400 Y	162	142
100-6T-3		82	935	2.2	5.5	230/400 Y	124	105
100-6T-4		83	970	3	7.8	230/400 Y	150	130
100-6T-5.5		84	970	4	11.0	400/690 D/Y	162	142
100-4T-7.5		92	1460	5.5	12.6	400/690 D/Y	151	131
100-4T-10		93	1460	7.5	17.7	400/690 D/Y	162	142
100-4T-15		94	1460	11	22.0	400/690 D/Y	215	195
100-4T-20		95	1460	15	29.0	400/690 D/Y	230	210
125-4T/3-10	1250	88	1460	7.5	17.7	400/690 D/Y	242	210
125-4T/3-15		89	1460	11	22.0	400/690 D/Y	294	266
125-4T/3-20		91	1460	15	29.0	400/690 D/Y	309	281
125-4T/3-25		91	1465	18.5	37.0	400/690 D/Y	377	334
125-4T/3-30		92	1470	22	42.0	400/690 D/Y	391	348
125-4T/3-40		93	1475	30	58.0	400/690 D/Y	472	429
125-4T/6-20		89	1460	15	29.0	400/690 D/Y	318	290
125-4T/6-25		90	1465	18.5	37.0	400/690 D/Y	386	343
125-4T/6-30		90	1470	22	42.0	400/690 D/Y	400	357
125-4T/6-40		92	1475	30	58.0	400/690 D/Y	481	437
125-4T/6-50		93	1480	37	73.0	400/690 D/Y	529	473
125-4T/9-25		88	1465	18.5	37.0	400/690 D/Y	395	352
125-4T/9-30		89	1470	22	42.0	400/690 D/Y	409	366
125-4T/9-40		91	1475	30	58.0	400/690 D/Y	490	446
125-4T/9-50		93	1480	37	73.0	400/690 D/Y	538	482
125-6T/3-4		79	970	3	7.8	230/400 Y	230	197
125-6T/3-5.5		80	970	4	11.0	400/690 D/Y	242	209
125-6T/3-7.5		81	970	5.5	12.4	400/690 D/Y	249	216
125-6T/3-10		83	970	7.5	17.0	400/690 D/Y	274	246
125-6T/3-15		84	955	11	26.0	400/690 D/Y	304	276
125-6T/3-20		85	975	15	31.0	400/690 D/Y	377	334
125-6T/6-5.5		77	970	4	11.0	400/690 D/Y	251	218
125-6T/6-7.5		77	970	5.5	12.4	400/690 D/Y	258	225
125-6T/6-10		79	970	7.5	17.0	400/690 D/Y	283	255
125-6T/6-15		81	955	11	26.0	400/690 D/Y	313	285
125-6T/6-20		82	975	15	31.0	400/690 D/Y	386	343
125-6T/9-10		78	970	7.5	17.0	400/690 D/Y	292	264
125-6T/9-15		81	955	11	26.0	400/690 D/Y	322	294
125-6T/9-20		84	975	15	31.0	400/690 D/Y	395	352
140-6T/3-5.5	1400	83	940	4	8.7	400/690 D/Y	279	242
140-6T/3-7.5		84	960	5.5	12.2	400/690 D/Y	287	250
140-6T/3-10		85	970	7.5	15.6	400/690 D/Y	339	300
140-6T/3-15		86	970	11	23.3	400/690 D/Y	356	317
140-6T/3-20		88	970	15	27.4	400/690 D/Y	436	386
140-6T/6-7.5		84	960	5.5	12.2	400/690 D/Y	297	260
140-6T/6-10		85	970	7.5	15.6	400/690 D/Y	349	310
140-6T/6-15		86	970	11	23.3	400/690 D/Y	366	327
140-6T/6-20		87	970	15	27.4	400/690 D/Y	445	396
140-6T/6-25		88	975	18.5	34.4	400/690 D/Y	497	448
140-6T/6-30		89	975	22	41.4	400/690 D/Y	506	457
140-6T/9-10		84	970	7.5	15.6	400/690 D/Y	358	319
140-6T/9-15		86	970	11	23.3	400/690 D/Y	375	336
140-6T/9-20		87	970	15	27.4	400/690 D/Y	455	405
140-6T/9-25		88	975	18.5	34.4	400/690 D/Y	506	458
140-6T/9-30		89	975	22	41.4	400/690 D/Y	515	467
140-6T/9-40		91	985	30	54.2	400/690 D/Y	673	611
140-6T/9-50		92	980	37	66.4	400/690 D/Y	751	696
140-8T/3-3		78	715	2.2	5.3	230/400 Y	279	242

one-speed fans

size	diameter D [mm]	acoustic pressure [dB A]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	fan weight m	
							long housing [kg]	short housing [kg]
140-8T/3-4	1400	78	710	3	7.2	230/400 Y	287	250
140-8T/3-5.5		79	730	4	10.0	400/690 D/Y	337	298
140-8T/3-7.5		81	730	5.5	13.8	400/690 D/Y	346	307
140-8T/3-10		82	725	7.5	17.8	400/690 D/Y	357	318
140-8T/6-3		78	715	2.2	5.3	230/400 Y	289	252
140-8T/6-4		79	710	3	7.2	230/400 Y	297	260
140-8T/6-5.5		80	730	4	10.4	400/690 D/Y	347	308
140-8T/6-7.5		81	730	5.5	13.8	400/690 D/Y	356	317
140-8T/6-10		82	725	7.5	17.8	400/690 D/Y	367	328
140-8T/6-15		83	725	11	21.7	400/690 D/Y	453	404
140-8T/9-4		79	710	3	7.2	230/400 Y	306	269
140-8T/9-5.5		79	730	4	10.4	400/690 D/Y	356	317
140-8T/9-7.5		81	730	5.5	13.8	400/690 D/Y	365	326
140-8T/9-10		82	725	7.5	17.8	400/690 D/Y	376	337
140-8T/9-15		83	725	11	21.7	400/690 D/Y	463	413
140-8T/9-20		86	725	15	32.9	400/690 D/Y	516	468
160-6T/3-10	1600	83	970	7.5	15.6	400/690 D/Y	412	358
160-6T/3-15		85	970	11	23.3	400/690 D/Y	429	375
160-6T/3-20		86	970	15	27.4	400/690 D/Y	522	453
160-6T/3-25		87	975	18.5	34.5	400/690 D/Y	574	504
160-6T/3-30		89	975	22	41.4	400/690 D/Y	583	513
160-6T/6-15		85	970	11	23.3	400/690 D/Y	440	386
160-6T/6-20		86	970	15	27.4	400/690 D/Y	532	463
160-6T/6-25		87	975	18.5	34.4	400/690 D/Y	584	515
160-6T/6-30		88	975	22	41.4	400/690 D/Y	593	524
160-6T/6-40		89	985	30	54.2	400/690 D/Y	768	669
160-6T/6-50		91	980	37	66.4	400/690 D/Y	842	757
160-6T/9-15		85	970	11	23.3	400/690 D/Y	450	396
160-6T/9-20		86	970	15	27.4	400/690 D/Y	542	473
160-6T/9-25		87	975	18.5	34.4	400/690 D/Y	594	525
160-6T/9-30		88	975	22	41.4	400/690 D/Y	603	534
160-6T/9-40		89	985	30	54.2	400/690 D/Y	778	679
160-6T/9-50		90	980	37	66.4	400/690 D/Y	852	768
160-6T/9-60		91	985	45	84.5	400/690 D/Y	1067	968
160-6T/9-75		92	985	55	100.0	400/690 D/Y	1112	1013
160-8T/3-4		77	710	3	7.2	230/400 Y	356	304
160-8T/3-5.5		79	730	4	10.4	400/690 D/Y	410	356
160-8T/3-7.5		80	730	5.5	13.8	400/690 D/Y	419	365
160-8T/3-10		81	725	7.5	17.8	400/690 D/Y	430	376
160-8T/3-15		83	725	11	31.7	400/690 D/Y	530	461
160-8T/6-5.5		77	730	4	10.4	400/690 D/Y	421	367
160-8T/6-7.5		79	730	5.5	13.8	400/690 D/Y	430	376
160-8T/6-10		80	725	7.5	17.8	400/690 D/Y	441	387
160-8T/6-15		82	725	11	21.7	400/690 D/Y	540	471
160-8T/6-20		83	725	15	32.9	400/690 D/Y	594	525
160-8T/6-25		84	730	18.5	34.9	400/690 D/Y	741	642
160-8T/9-7.5		79	730	5.5	13.8	400/690 D/Y	440	386
160-8T/9-10		80	725	7.5	17.8	230/400 Y	451	397
160-8T/9-15		82	725	11	21.7	230/400 Y	550	481
160-8T/9-20		83	725	15	33.0	230/400 Y	604	535
160-8T/9-25		84	730	18.5	34.9	230/400 Y	751	652
160-8T/9-30		85	730	22	41.1	230/400 Y	776	677
160-8T/9-40		86	730	30	56.3	230/400 Y	837	753

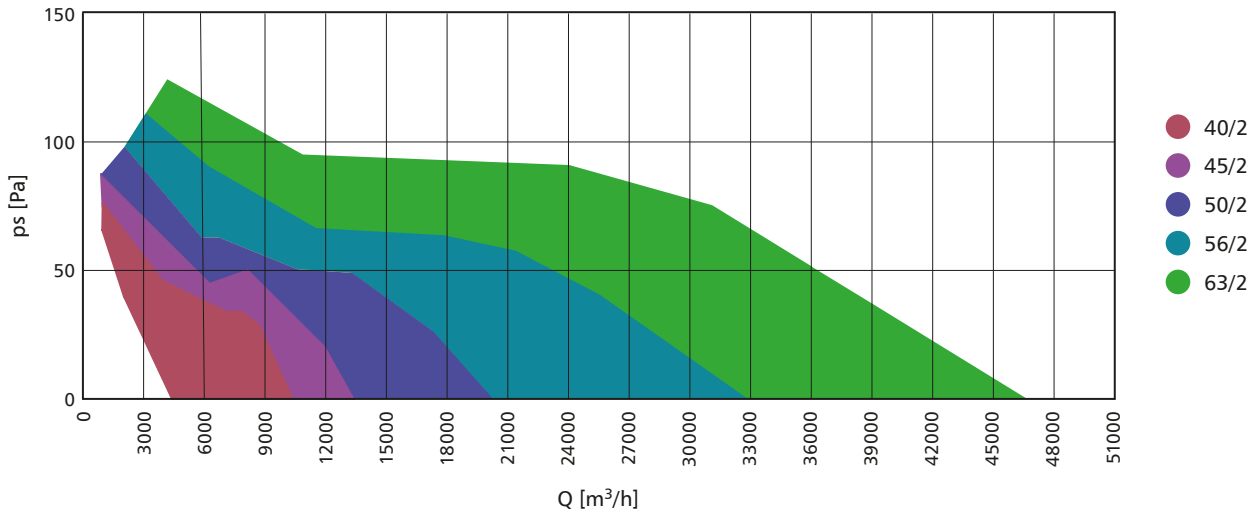
two-speed fans

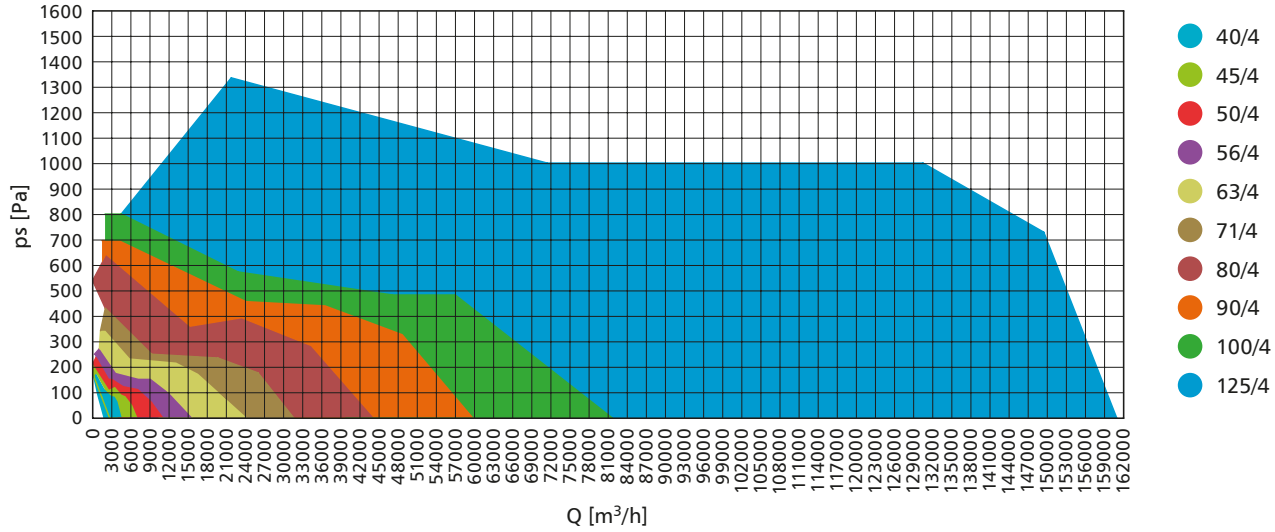
size	diameter D [mm]	acoustic pressure [dB A]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	fan weight m	
							long ho-using [kg]	short ho-using [kg]
40-6/12T-0.75	400	53/38	940/440	0.55/0.9	1.60/0.55	400/400 Y	41	38
40-2/4T-1.5		76/61	2920/1460	1.10/0.25	2.90/2.10	400/400 Y	34	32
40-2/4T-2		77/62	2940/1460	1.50/0.37	4.40/1.40	400/400 Y	35	33
45-6/12T-0.75	450	55/40	940/440	0.55/0.09	1.60/0.55	400/400 Y	42	39
45-2/4T-2		78/63	2940/1460	1.50/0.37	5.70/1.80	400/400 Y	37	34
45-2/4T-3		80/65	2930/1450	2.20/0.60	4.40/1.40	400/400 Y	39	36
50-6/12T-0.75	500	57/42	940/440	0.55/0.09	1.60/0.55	400/400 Y	44	40
50-2/4T-4		82/67	2920/1440	3.00/0.80	6.70/2.00	400/400 Y	51	44
50-2/4T-6		83/68	2930/1450	4.50/1.30	10.00/3.20	400/400 Y	67	60
56-6/12T-0.75	560	62/47	940/440	0.55/0.09	1.60/0.55	400/400 Y	48	43
56-4/8T-1.5		74/59	1440/710	1.10/0.25	2.90/1.40	400/400 Y	48	43
56-4/8T-2		75/60	1415/715	1.50/0.30	3.60/1.50	400/400 Y	59	55
56-2/4T-6		88/72	2930/1450	4.50/1.30	10.00/3.20	400/400 Y	71	63
56-2/4T-12		89/74	2920/1440	9.00/2.50	20.70/5.50	400/400 Y	137	129
63-6/12T-0.75	630	65/50	940/440	0.55/0.09	1.60/0.55	400/400 Y	55	49
63-6/12T-1		66/51	940/440	0.75/0.15	2.20/0.87	400/400 Y	61	55
63-4/8T-1.5		74/59	1440/710	1.10/0.25	2.9/1.40	400/400 Y	55	49
63-4/8T-2		75/60	1415/715	1.50/0.30	3.60/1.50	400/400 Y	70	60
63-4/8T-3		76/61	1415/715	2.20/0.45	5.20/1.90	400/400 Y	77	66
63-4/8T-4		77/62	1425/710	3.00/0.60	6.80/2.20	400/400 Y	86	77
63-2/4T-12		90/75	2920/1440	9.00/2.50	18.50/5.50	400/400 Y	151	133
63-2/4T-22		91/76	2960/1480	16.00/4.00	32.30/8.90	400/400 Y	188	170
71-6/12T-0.75	710	67/52	940/440	0.55/0.09	1.60/0.55	400/400 Y	61	56
71-6/12T-1		68/53	940/441	0.75/0.15	2.20/0.87	400/400 Y	67	62
71-6/12T-1.5		69/54	950/470	1.10/0.18	3.00/1.15	400/400 Y	77	69
71-4/8T-1.5		78/63	1440/710	1.10/0.25	2.90/1.40	400/400 Y	61	56
71-4/8T-2		79/64	1415/715	1.50/0.30	3.60/1.50	400/400 Y	76	67
71-4/8T-3		81/66	1415/715	2.20/0.45	5.20/1.90	400/400 Y	82	74
71-4/8T-4		82/67	1425/710	3.00/0.60	6.80/2.20	400/400 Y	92	83
80-6/12T-1.5	800	72/57	950/470	1.10/0.18	3.00/1.15	400/400 Y	86	77
80-6/12T-2		73/58	950/460	1.50/0.25	4.60/1.90	400/400 Y	91	82
80-6/12T-3		74/59	940/470	2.20/0.37	5.60/2.20	400/400 Y	100	91
80-4/8T-3		82/67	1415/715	2.20/0.45	5.20/1.90	400/400 Y	91	82
80-4/8T-4		83/68	1425/710	3.00/0.60	6.80/2.20	400/400 Y	101	92
80-4/8T-5.5		84/69	1455/725	4.00/0.80	9.30/3.40	400/400 Y	127	118
90-6/12T-2	900	77/62	960/470	1.50/0.25	4.30/1.70	400/400 Y	114	96
90-6/12T-3		78/63	940/470	2.20/0.37	5.60/2.20	400/400 Y	123	105
90-6/12T-4		79/64	970/475	3.00/0.55	8.90/3.50	400/400 Y	143	126
90-4/8T-4		87/72	1420/705	3.00/0.60	6.90/2.30	400/400 Y	124	106
90-4/8T-5.5		89/74	1450/720	4.00/0.80	9.40/3.50	400/400 Y	150	132
90-4/8T-7.5		91/76	1455/725	5.50/1.10	12.80/4.60	400/400 Y	157	140
90-4/8T-9		92/77	1455/725	6.70/1.50	15.50/5.50	400/400 Y	157	140
100-6/12T-3	1000	82/67	940/470	2.20/0.37	5.60/2.20	400/400 Y	130	112
100-6/12T-4		83/68	970/475	3.00/0.55	8.90/3.50	400/400 Y	151	131
100-6/12T-5.5		84/69	970/480	4.00/0.65	11.30/4.20	400/400 Y	162	142
100-4/8T-7.5		92/77	1455/725	5.50/1.10	12.80/4.60	400/400 Y	165	145
100-4/8T-9		93/78	1455/725	6.70/1.50	15.50/5.50	400/400 Y	165	145
100-4/8T-15		94/79	1470/725	11.00/2.80	23.20/8.70	400/400 Y	215	195
100-4/8T-20		95/80	1470/725	15.00/3.80	31.70/11.80	400/400 Y	230	210

two-speed fans

size	diameter D [mm]	acoustic pressure [dB A]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	fan weight m	
							long ho-using [kg]	short ho-using [kg]
125-4/8T/3-9	1250	88/68	1455/725	6.70/1.50	15.50/5.50	400/400 Y	243	210
125-4/8T/3-15		89/69	1470/725	11.00/2.80	23.20/8.70	400/400 Y	294	266
125-4/8T/3-20		91/71	1470/725	15.00/3.80	31.70/11.80	400/400 Y	309	281
125-4/8T/3-27		92/71	1470/735	20.00/4.00	38.00/13.00	400/400 Y	391	348
125-4/8T/3-37		93/72	1475/735	27.00/6.00	51.00/20.60	400/400 Y	472	429
125-4/8T/3-40		93/72	1480/735	30.00/10.00	62.00/27.00	400/400 Y	618	562
125-4/8T/6-20		89/68	1470/725	15.00/3.80	31.70/11.80	400/400 Y	318	290
125-4/8T/6-22		89/69	1470/735	16.50/3.30	31.80/12.00	400/400 Y	303	275
125-4/8T/6-27		90/69	1470/735	20.00/4.00	38.00/13.00	400/400 Y	400	357
125-4/8T/6-37		90/70	1475/735	27.00/6.00	51.00/20.60	400/400 Y	481	437
125-4/8T/6-40		92/71	1480/735	30.00/10.00	62.00/27.00	400/400 Y	529	473
125-4/8T/9-22		88/69	1465/735	16.50/3.30	31.80/12.00	400/400 Y	312	284
125-4/8T/9-27		89/70	1470/735	20.00/4.00	38.00/13.00	400/400 Y	409	366
125-4/8T/9-37		90/70	1475/735	27.00/6.00	51.00/20.60	400/400 Y	490	446
125-4/8T/9-40		91/71	1480/735	30.00/10.00	62.00/27.00	400/400 Y	636	580
125-6/12T/3-4		79/64	970/475	3.00/0.55	8.90/3.50	400/400 Y	232	199
125-6/12T/3-5.5		80/65	970/480	4.00/0.65	11.30/4.20	400/400 Y	243	210
125-6/12T/3-7.5		81/66	970/480	5.50/1.00	13.70/5.60	400/400 Y	263	230
125-6/12T/3-10		83/68	970/480	7.50/1.40	19.00/8.00	400/400 Y	294	266
125-6/12T/3-15		84/69	970/470	11.00/2.00	28.50/13.00	400/400 Y	309	281
125-6/12T/3-24		85/70	970/480	17.50/3.50	36.00/14.50	400/400 Y	472	429
125-6/12T/6-5.5		77/62	970/480	4.00/0.65	11.30/4.20	400/400 Y	252	219
125-6/12T/6-7.5		77/62	970/480	5.50/1.00	13.70/5.60	400/400 Y	272	239
125-6/12T/6-10		79/64	970/480	7.50/1.40	19.00/8.00	400/400 Y	303	275
125-6/12T/6-15		81/66	970/470	11.00/2.00	28.50/13.00	400/400 Y	318	290
125-6/12T/6-24		82/67	970/480	17.50/3.50	36.00/14.50	400/400 Y	481	437
125-6/12T/9-10		78/63	970/480	7.50/1.40	19.00/8.00	400/400 Y	312	284
125-6/12T/9-15		81/66	970/470	11.00/2.00	28.50/13.00	400/400 Y	327	299
125-6/12T/9-24		84/69	970/480	17.50/3.50	36.00/14.50	400/400 Y	490	446

Q - capacity [m^3/h]
ps - static pressure [Pa]

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Q [m³/h]
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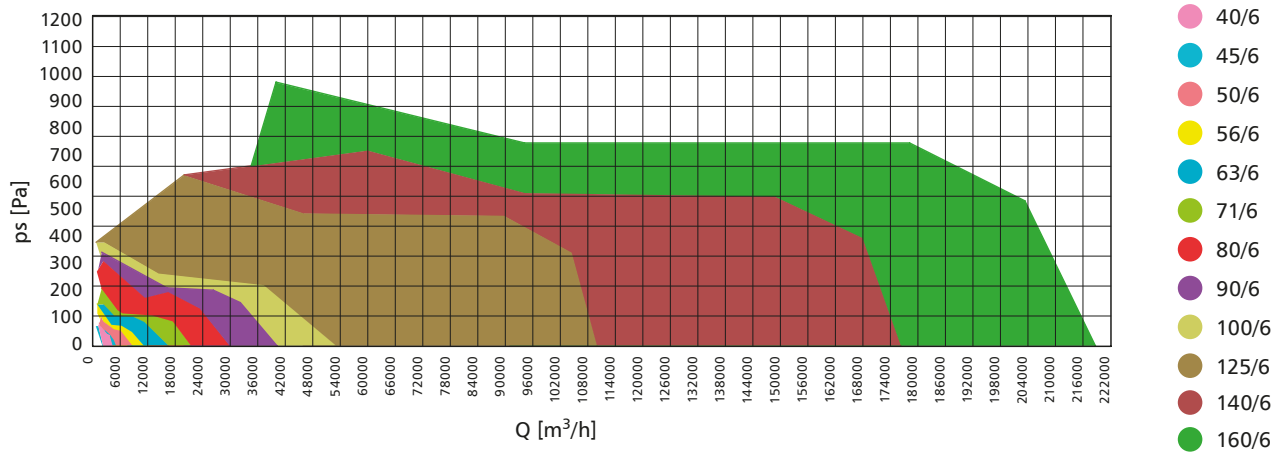
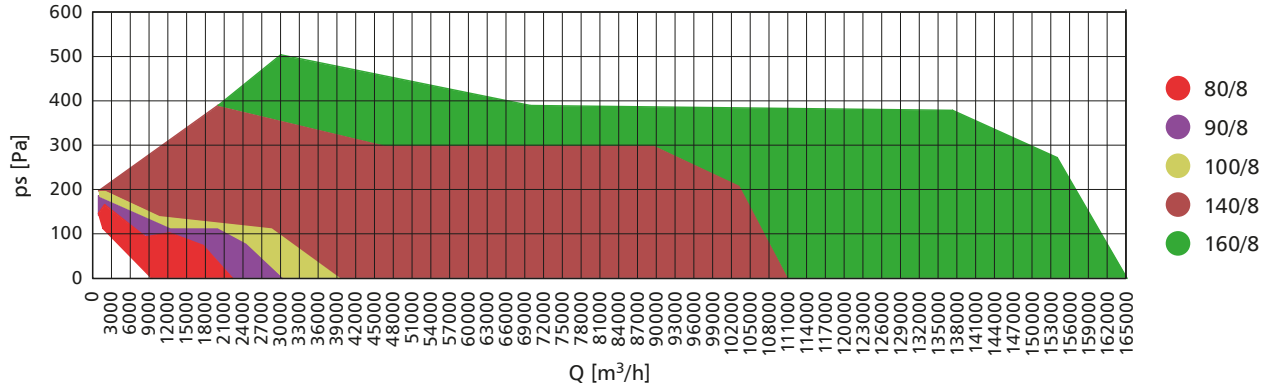
45/4
50/4
56/4
63/4
71/4
80/4
90/4
100/4
125/4


ps [Pa]
Q [m³/h]
40/6
45/6
50/6
56/6
63/6
71/6
80/6
90/6
100/6
125/6
140/6
160/6


ps [Pa]
Q [m³/h]
80/8
90/8
100/8
140/8
160/8

3.4.4. acoustic parameters

The supplied data refer to measurement of sound pressure and loudness level carried out in a free area at the distance equal to two lengths of the housing plus impeller's diameter but not smaller than 1.5 m.

Sound power level Lw(A), spectrum dB(A) at given frequency in Hz.

	sound pressure level [dB A]							
size	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
40-2-1.5	48	69	76	81	84	80	73	62
40-2-2	49	70	77	82	85	81	74	63
40-4-0.75	36	57	64	69	72	68	61	50
40-4-1.5	33	54	61	66	69	65	58	47
40-4-2	34	55	62	67	70	66	59	48
40-6	25	46	53	58	61	57	50	39
40-12	10	31	38	43	46	42	35	24
45-2-2	50	71	78	83	86	82	75	64
45-2-3	52	73	80	85	88	84	77	66
45-4-0.75	40	61	68	73	76	72	65	54
45-4-2	35	56	63	68	71	67	60	49
45-4-3	37	58	65	70	73	69	62	51
45-6	27	48	55	60	63	59	52	41
45-12	12	33	40	45	48	44	37	26
50-2-4	57	77	85	90	92	89	82	71
50-2-5.5	58	78	86	91	93	90	83	72
50-2-6	58	78	86	91	93	90	83	72
50-4-1	44	64	72	77	79	76	69	58
50-4-4	42	62	70	75	77	74	67	56
50-4-6	43	63	71	76	78	75	68	57
50-6	32	52	60	65	67	64	57	46
50-12	17	37	45	50	52	49	42	31
50-2-5.5	63	83	91	96	98	95	88	77
56-2-6	63	83	91	96	98	95	88	77
56-2-12	64	84	92	97	99	96	89	78
56-4-1	48	68	76	81	83	80	73	62
56-4-1.5	49	69	77	82	84	81	74	63
56-4-2	50	70	78	83	85	82	75	64
56-4-6	48	68	76	81	83	80	73	62
56-4-12	49	69	77	82	84	81	74	63
56-6	37	57	65	70	72	69	62	51
56-8-1.5	34	54	62	67	69	66	59	48
56-8-2	35	55	63	68	70	67	60	49
56-12	22	42	50	55	57	54	47	36
63-2-12	67	87	95	100	102	99	92	81
63-2-22	68	88	96	101	103	100	93	82
63-4-1	50	70	78	83	85	82	75	64
63-4-1.5	48	68	76	81	83	80	73	65
63-4-2	52	68	76	81	83	80	73	66
63-4-3	53	70	78	83	85	82	77	67
63-4-4	54	71	79	84	86	83	78	68
63-4-12	52	72	80	85	87	84	77	66
63-4-22	53	73	81	86	88	85	78	67
63-6-0.75	42	60	68	73	75	72	65	56
63-6-1	43	62	70	75	77	74	67	57
63-8-1.5	33	53	61	66	68	65	58	50
63-8-2	37	53	61	66	68	65	58	51
63-8-3	38	55	63	68	70	67	62	52
63-8-4	39	56	64	69	71	68	63	53
63-12-0.75	27	43	51	56	58	55	48	37
63-12-1	28	45	53	58	60	57	50	42

	sound pressure level [dB A]							
size	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
71-4-1.5	54	74	82	87	89	86	79	69
71-4-2	53	73	81	86	88	85	78	70
71-4-3	58	72	80	85	87	84	77	71
71-4-4	59	73	81	86	88	85	78	72
71-6-0.75	44	63	72	74	76	73	66	55
71-6-1	45	65	73	75	77	74	67	56
71-6-1.5	46	66	71	76	78	75	68	57
71-8-1.5	38	58	66	71	73	70	63	54
71-8-2	38	58	66	71	73	70	63	55
71-8-3	43	57	65	70	72	69	62	56
71-8-4	44	58	66	71	73	70	63	57
71-12-0.75	29	44	52	57	59	56	49	38
71-12-1	30	46	54	59	61	58	51	40
71-12-1.5	31	46	54	59	61	58	51	40
80-4-3	57	77	85	90	92	89	82	73
80-4-4	56	76	84	89	91	88	81	74
80-4-5.5	56	76	84	89	91	88	81	70
80-6-1.5	49	66	74	79	81	78	71	60
80-6-2	50	67	75	80	82	79	72	61
80-6-3	51	68	76	81	83	80	73	62
80-8-0.75	47	60	68	73	75	72	65	54
80-8-1	48	61	69	74	76	73	66	55
80-8-3	42	62	70	75	77	74	67	58
80-8-4	41	61	69	74	76	73	66	59
80-8-5.5	40	60	68	73	75	72	65	59
80-12-1.5	34	49	57	62	64	61	54	43
80-12-2	35	50	58	63	65	62	55	44
80-12-3	36	51	59	64	66	63	56	45
90-4-4	61	82	89	94	97	93	86	79
90-4-5.5	60	81	88	93	96	92	85	74
90-4-7.5	59	80	87	92	95	91	84	73
90-4-9	58	79	86	91	94	90	83	72
90-4-10	58	79	86	91	94	90	83	72
90-6-2	49	70	77	82	85	81	74	63
90-6-3	56	70	77	82	85	81	74	63
90-6-4	57	72	79	84	87	83	76	65
90-8-1	42	63	70	75	78	74	67	56
90-8-2	51	66	73	78	81	77	70	59
90-8-3	52	66	73	78	81	77	70	59
90-8-4	46	67	74	79	82	78	71	64
90-8-5.5	45	66	73	78	81	77	70	59
90-8-7.5	43	64	71	76	79	75	68	57
90-8-9	43	64	71	76	79	75	68	57
90-12-2	32	53	60	65	68	64	57	46
90-12-3	41	53	60	65	68	64	57	46
90-12-4	42	55	62	67	70	66	59	48

size	sound pressure level [dB A]							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
100-4-7.5	64	84	92	97	99	96	89	78
100-4-9	63	83	91	96	98	95	88	77
100-4-10	62	82	90	95	97	94	87	76
100-4-15	61	81	89	94	96	93	86	75
100-4-20	63	83	91	96	98	95	88	77
100-6-3	61	72	80	85	87	84	77	66
100-6-4	64	72	80	85	87	84	77	66
100-6-5.5	64	73	81	86	88	85	78	67
100-8-2	56	66	74	79	81	78	71	60
100-8-3	57	68	76	81	83	80	73	62
100-8-4	58	68	76	81	83	80	73	62
100-8-7.5	49	69	77	82	84	81	74	63
100-8-9	48	68	76	81	83	80	73	62
100-8-15	46	66	74	79	81	78	71	60
100-8-20	47	67	75	80	82	79	72	61
100-12-3	46	55	63	68	70	67	60	49
100-12-4	48	55	63	68	70	67	60	49
100-12-5.5	49	56	64	69	71	68	61	50
125-4/3-9	70	76	88	98	98	94	86	82
125-4/3-10	70	76	88	98	98	94	86	82
125-4/3-15	71	77	89	99	99	95	87	83
125-4/3-20	73	79	91	101	101	97	89	85
125-4/3-25	73	79	91	101	101	97	89	85
125-4/3-27	74	80	92	102	102	98	90	86
125-4/3-30	74	80	92	102	102	98	90	86
125-4/3-37	75	81	93	103	103	99	91	87
125-4/3-40	75	81	93	103	103	99	91	87
125-6/3-5.5	66	74	86	90	88	83	74	70
125-6/3-7.5	67	75	87	91	89	84	75	71
125-6/3-10	69	77	89	93	91	86	77	73
125-6/3-15	70	78	90	94	92	87	78	74
125-6/3-20	71	79	91	95	93	88	79	75
125-6/3-24	71	79	91	95	93	88	79	75
125-8/3-9	50	56	68	78	78	74	66	62
125-8/3-15	51	57	69	79	79	75	67	63
125-8/3-20	53	59	71	81	81	77	69	65
125-8/3-27	53	59	71	81	81	77	69	65
125-8/3-37	54	60	72	82	82	78	70	66
125-8/3-40	54	60	72	82	82	78	70	66
125-6/3-4	65	73	85	89	87	82	73	69
125-12/3-4	50	58	70	74	72	67	58	54
125-12/3-5.5	51	59	71	75	73	68	59	55
125-12/3-7.5	52	60	72	76	74	69	60	56
125-12/3-10	54	62	74	78	76	71	62	58
125-12/3-15	55	63	75	79	77	72	63	59
125-12/3-24	56	64	76	80	78	73	64	60
125-4/6-20	67	75	91	98	100	95	89	85
125-4/6-22	67	75	91	98	100	95	89	85
125-4/6-25	68	76	92	99	101	96	90	86
125-4/6-27	68	76	92	99	101	96	90	86
125-4/6-30	68	76	92	99	101	96	90	86
125-4/6-37	68	76	92	99	101	96	90	86
125-4/6-40	70	78	94	101	103	98	92	88
125-4/6-50	71	79	95	102	104	99	93	89
125-6/6-5.5	60	69	82	85	86	83	72	68
125-6/6-7.5	60	69	82	85	86	83	72	68
125-6/6-10	62	71	84	87	88	85	74	70
125-6/6-15	64	73	86	89	90	87	76	72

size	sound pressure level [dB A]							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
125-6/6-20	65	74	87	90	91	88	77	73
125-6/6-24	65	74	87	90	91	88	77	73
125-8/6-20	46	54	70	77	79	74	68	64
125-8/6-22	47	55	71	78	80	75	69	65
125-8/6-27	47	55	71	78	80	75	69	65
125-8/6-37	48	56	72	79	81	76	70	66
125-8/6-40	49	57	73	80	82	77	71	67
125-12/6-5.5	45	54	67	70	71	68	57	53
125-12/6-7.5	45	54	67	70	71	68	57	53
125-12/6-10	47	56	69	72	73	70	59	55
125-12/6-15	49	58	71	74	75	72	61	57
125-12/6-24	50	59	72	75	76	73	62	58
125-4/9-22	66	74	91	97	98	93	88	84
125-4/9-25	66	74	91	97	98	93	88	84
125-4/9-27	67	75	92	98	99	94	89	85
125-4/9-30	67	75	92	98	99	94	89	85
125-4/9-37	68	76	93	99	100	95	90	86
125-4/9-40	69	77	94	100	101	96	91	87
125-4/9-50	71	79	96	102	103	98	93	89
125-6/9-10	58	68	83	87	86	85	74	70
125-6/9-15	61	71	86	90	89	88	77	73
125-6/9-20	64	74	89	93	92	91	80	76
125-6/9-24	64	74	89	93	92	91	80	76
125-8/9-22	47	55	72	78	79	74	69	65
125-8/9-27	48	56	73	79	80	75	70	66
125-8/9-37	48	56	73	79	80	75	70	66
125-8/9-40	49	57	74	80	81	76	71	67
125-12/9-10	43	53	68	72	71	70	59	55
125-12/9-15	46	56	71	75	74	73	62	58
125-12/9-24	49	59	74	78	77	76	65	61
140-6/3-5.5	69	79	87	92	91	90	77	77
140-6/3-7.5	70	80	88	93	92	91	78	78
140-6/3-10	71	81	89	94	93	92	79	79
140-6/3-15	72	82	90	95	94	93	80	80
140-6/3-20	74	84	92	97	96	95	82	82
140-6/6-7.5	68	83	92	94	91	85	77	73
140-6/6-10	69	84	93	95	92	86	78	74
140-6/6-15	70	85	94	96	93	87	79	75
140-6/6-20	71	86	95	97	94	88	80	76
140-6/6-25	72	87	96	98	95	89	81	77
140-6/6-30	73	88	97	99	96	90	82	78
140-6/9-10	66	84	93	92	91	87	78	73
140-6/9-15	68	86	95	94	93	89	80	75
140-6/9-20	69	87	96	95	94	90	81	76
140-6/9-25	70	88	97	96	95	91	82	77
140-6/9-30	71	89	98	97	96	92	83	78
140-6/9-40	73	91	100	99	98	94	85	80
140-6/9-50	74	92	101	100	99	95	86	81
140-8/3-3	64	74	82	87	86	85	72	67
140-8/3-4	64	74	82	87	86	85	72	67
140-8/3-5.5	65	75	83	88	87	86	73	68
140-8/3-7.5	67	77	85	90	89	88	75	70
140-8/3-10	68	78	86	91	90	89	76	71
140-8/6-3	63	75	84	88	86	80	70	67
140-8/6-4	64	76	85	89	87	81	71	68
140-8/6-5.5	65	77	86	90	88	82	72	69
140-8/6-7.5	66	78	87	91	89	83	73	70
140-8/6-10	67	79	88	92	90	84	74	71
140-8/6-15	68	80	89	93	91	85	75	72

size	sound pressure level [dB A]							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
140-8/9-4	62	73	84	89	87	83	73	68
140-8/9-5.5	62	73	84	89	87	83	73	68
140-8/9-7.5	64	75	86	91	89	85	75	70
140-8/9-10	65	76	87	92	90	86	76	71
140-8/9-15	66	77	88	93	91	87	77	72
140-8/9-20	69	80	91	96	94	90	80	75
160-6/3-10	69	79	87	92	91	90	77	72
160-6/3-15	71	81	89	94	93	92	79	74
160-6/3-20	72	82	90	95	94	93	80	75
160-6/3-25	73	83	91	96	95	94	81	76
160-6/3-30	75	85	93	98	97	96	83	78
160-6/6-15	69	84	93	95	92	86	78	74
160-6/6-20	70	85	94	96	93	87	79	75
160-6/6-25	71	86	95	97	94	88	80	76
160-6/6-30	72	87	96	98	95	89	81	77
160-6/6-40	73	88	97	99	96	90	82	78
160-6/6-50	75	90	99	101	98	92	84	80
160-6/9-15	67	85	94	93	92	88	79	74
160-6/9-20	68	86	95	94	93	89	80	75
160-6/9-25	69	87	96	95	94	90	81	76
160-6/9-30	70	88	97	96	95	91	82	77
160-6/9-40	71	89	98	97	96	92	83	78

size	sound pressure level [dB A]							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
160-6/9-50	72	90	99	98	97	93	84	79
160-6/9-60	73	91	100	99	98	94	85	80
160-6/9-75	74	92	101	100	99	95	86	81
160-8/3-4	63	73	81	86	85	84	71	66
160-8/3-5.5	65	75	83	88	87	86	73	68
160-8/3-7.5	66	76	84	89	88	87	74	69
160-8/3-10	67	77	85	90	89	88	75	70
160-8/3-15	69	79	87	92	91	90	77	72
160-8/6-5.5	61	76	85	87	84	78	70	66
160-8/6-7.5	63	78	87	89	86	80	72	68
160-8/6-10	64	79	88	90	87	81	73	69
160-8/6-15	66	81	90	92	89	83	75	71
160-8/6-20	67	82	91	93	90	84	76	72
160-8/6-25	68	83	92	94	91	85	77	73
160-8/9-7.5	61	79	88	87	86	82	73	68
160-8/9-10	62	80	89	88	87	83	74	69
160-8/9-15	64	82	91	90	89	85	76	71
160-8/9-20	65	83	92	91	90	86	77	72
160-8/9-25	66	84	93	92	91	87	78	73
160-8/9-30	67	85	94	93	92	88	79	74
160-8/9-40	68	86	95	94	93	89	80	75

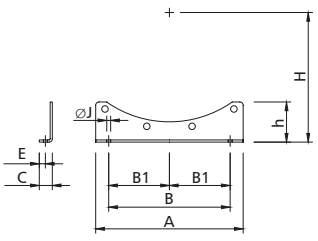
3.5. accessories

3.5.1. mounting feet SWc

The mounting feet SWc are designed for installing a fan horizontally (the airflow is in parallel to the installation surface). The feet are made of galvanized steel sheet, powder-coated as standard using the same colour as the fan.

The feet attach to the fan's casing flange with M8 or M10 bolts, depending on the fan size. The openings in the lower part of the feet can be used for installation of shock absorbers.

fan	type	mounting feet SWc							
		A [mm]	B [mm]	B1 [mm]	C [mm]	E [mm]	h [mm]	H [mm]	J [mm]
mcr Monsun R 40	**SW-40c**	240	200	100	30	13	60	255.5	10
mcr Monsun R 45	**SW-45c**	450	400	200	35	14.5	125	278	12
mcr Monsun R 50	**SW-50c**	450	400	200	35	14.5	125	305	12
mcr Monsun R 56	**SW-56c**	520	430	215	40	17	155	338	13
mcr Monsun R 63	**SW-63c**	520	430	215	40	17	155	385.5	13
mcr Monsun R 71	**SW-71c**	490	450	225	50	21	150	445	13
mcr Monsun R 80	**SW-80c**	600	560	280	50	21	150	490	13
mcr Monsun R 90	**SW-90c**	620	560	280	60	28	175	547.5	18
mcr Monsun R 100	**SW-100c**	680	560	280	60	28	185	597.5	18
mcr Monsun R 125	**SW-125c**	1000	900	300	60	28	285	726.5	18
mcr Monsun R 140	**SW-140c**	1100	1000	500	60	30	306	800	18
mcr Monsun R 160	**SW-160c**	1300	1200	600	60	25	290	890	18

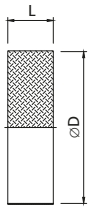


3.5.2. flexible connections KDc

The flexible connection KDc is used for eliminating vibrations generated during operation of the fan which might be transmitted to the ventilation system. The connection may also compensate for thermal expansion of ducts during the operation of smoke exhaustion system. When an mcr Monsun R fan is integrated in a ventilation system including suction and pumping side, it should have two flexible connections, one on each side.

flexible connections KDc			
fan	type	D [mm]	L [mm]
mcr Monsun R 40	KD-40c	400	300
mcr Monsun R 45	KD-45c	450	300
mcr Monsun R 50	KD-50c	500	300
mcr Monsun R 56	KD-56c	560	300
mcr Monsun R 63	KD-63c	630	300
mcr Monsun R 71	KD-71c	710	300

flexible connections KDc			
fan	type	D [mm]	L [mm]
mcr Monsun R 80	KD-80c	800	300
mcr Monsun R 90	KD-90c	900	300
mcr Monsun R 100	KD-100c	1000	300
mcr Monsun R 125	KD-125c	1250	300
mcr Monsun R 140	KD-140c	1400	~300
mcr Monsun R 160	KD-160c	1600	~300

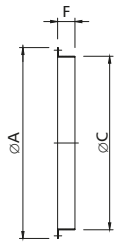


3.5.3. counter flanges PKc

The PKc counter flange is designed for installing flexible connections KD to mcr Monsun R fan and the ventilation system. As standard, the counter flange is made of powder-painted steel sheet.

counter flanges PKc				
fan	type	C [mm]	A [mm]	F [mm]
mcr Monsun R 40	PK-40c	400	480	80
mcr Monsun R 45	PK-45c	450	530	80
mcr Monsun R 50	PK-50c	500	590	80
mcr Monsun R 56	PK-56c	560	650	80
mcr Monsun R 63	PK-63c	630	720	80
mcr Monsun R 71	PK-71c	710	800	80

counter flanges PKc				
fan	type	C [mm]	A [mm]	F [mm]
mcr Monsun R 80	PK-80c	800	890	100
mcr Monsun R 90	PK-90c	900	1000	100
mcr Monsun R 100	PK-100c	1000	1100	100
mcr Monsun R 125	PK-125c	1250	1365	100
mcr Monsun R 140	PK-140c	1400	1520	100
mcr Monsun R 160	PK-160c	1600	1720	100

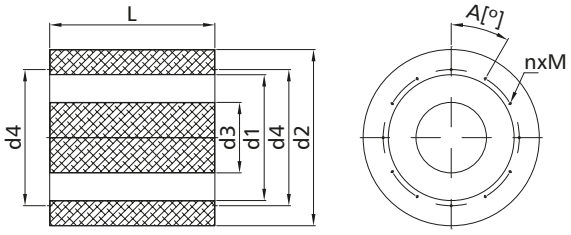


3.5.4. noise silencers THc

The THc noise silencer is designed to reduce the noise generated during fan operation in the ventilation system. The silencer's housing is made of galvanised steel sheet with core and internal part made of perforated zinc coated sheet; high-temperature wool with increased sound absorbing characteristics is used for damping.

The threaded holes in the silencer allow direct fastening on the fan housing flange. If using this installation method, seal the joint with high-temperature silicone.

noise silencers THc									
fan	type	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	A [°]	nxM	m [kg]
mcr Monsun R 40	TH-40c	404	600	220	450	950	45	8xM8	53
mcr Monsun R 45	TH-45c	454	650	250	500	950	45	8xM8	56
mcr Monsun R 50	TH-50c	504	700	280	560	950	30	12xM8	62
mcr Monsun R 56	TH-56c	564	760	315	620	950	30	12xM8	69
mcr Monsun R 63	TH-63c	634	830	355	690	950	30	12xM8	78
mcr Monsun R 71	TH-71c	716	960	400	770	1400	22'30	16xM8	122
mcr Monsun R 80	TH-80c	806	1050	450	860	1400	22'30	16xM8	138
mcr Monsun R 90	TH-90c	906	1150	500	970	1400	22'30	16xM8	155
mcr Monsun R 100	TH-100c	1006	1250	560	1070	1400	22'30	16xM10	170
mcr Monsun R 125	TH-125c	1256	1500	600	1320	1400	18	20xM10	200



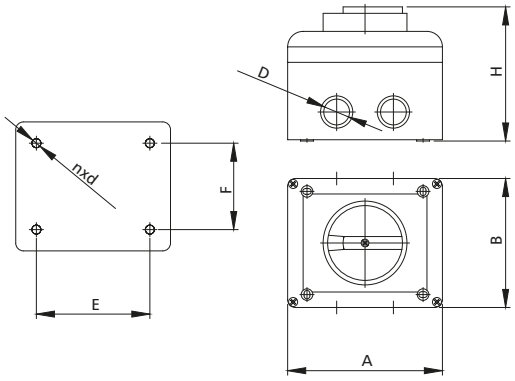
Silencers for fan sizes 140 and 160 on request.

3.5.5. service switches WS

The service switch WS is designed for cutting off power from fan for the period of servicing. The switch has an extra auxiliary contact for signaling the cut-off position in case of not returning the switch to original position, i.e. power supply to fan active after service inspection. For installation directly on the fan's housing, use special support bracket WW.

The 3-pole service switch is designed for one-speed 230/400VY motors and the 6-pole switch for one- and two-speed motors rated at 400/690 V D/Y and two-speed motors rated at 230/400 V.

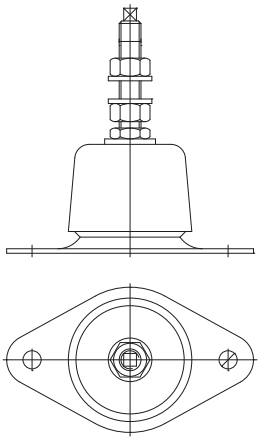
service switches WS										
type	**A [mm]**	**B [mm]**	**E [mm]**	**F [mm]**	**H [mm]**	**nxd [mm]**	**U [V]**	**I [A]**	**dławice D [mm]**	**comments**
WS-16/3	**90**	90	67	48	95	4x4	690	16	M20[x4]	3-pole
WS-16/6	**90**	90	67	48	95	4x4	690	16	M20[x4]	3-pole
WS-32/6	**116**	100	90	52	108	4x4	690	32	M25[x4]	6-pole
WS-63/6	**170**	155	105	95	185	4x6	690	63	M25/M32[x4]	6-pole
WS-100/6	**200**	180	130	125	200	4x6	690	100	M25/M40[x4]	6-pole



3.5.6. shock absorbers AM/BM

The shock absorbers AM/BM reduce vibrations generated during operation of the fan by limiting the vibration transferring to the floor. When a fan is placed correctly on the shock absorbers installed in the feet it works more silently and is more stable.

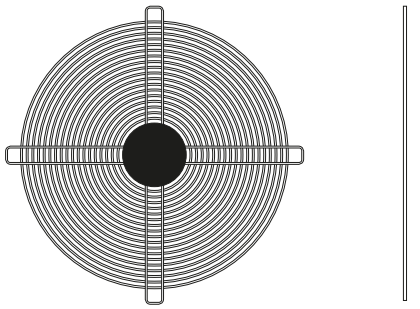
shock absorbers AM/BM	
fan	**type**
mcr Monsun R 40	**AM-40**
mcr Monsun R 45	**AM-45**
mcr Monsun R 50	**AM-50**
mcr Monsun R 56	**AM-56**
mcr Monsun R 63	**AM-63**
mcr Monsun R 71	**AM-71**
mcr Monsun R 80	**AM-80**
mcr Monsun R 90	**AM-90**
mcr Monsun R 100	**AM-100**
mcr Monsun R 125	**AM-125**
mcr Monsun R 140	**AM-140**
mcr Monsun R 160	**AM-160**



3.5.7. cover grills SOc

The cover grills SOc protect the fan against foreign bodies. The product is designed for direct installation on the fan's housing. With long housing version, the covers may be installed on the suction and pressure side and for short housing only on the fan's suction side.

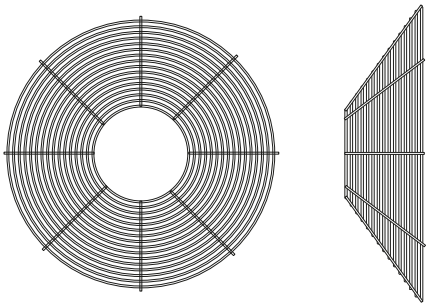
cover grills SOc	
fan	**type**
mcr Monsun R 40	SO-40c
mcr Monsun R 45	SO-45c
mcr Monsun R 50	SO-50c
mcr Monsun R 56	SO-56c
mcr Monsun R 63	SO-63c
mcr Monsun R 71	SO-71c
mcr Monsun R 80	SO-80c
mcr Monsun R 90	SO-90c
mcr Monsun R 100	SO-100c
mcr Monsun R 125	SO-125c



3.5.8. cover grills SOi

The cover grils SOi protect the fan against foreign bodies. The product is designed for direct mounting on the fan's casing flange. This type of covers is intended for short housing and may be installed only on the suction side of fan.

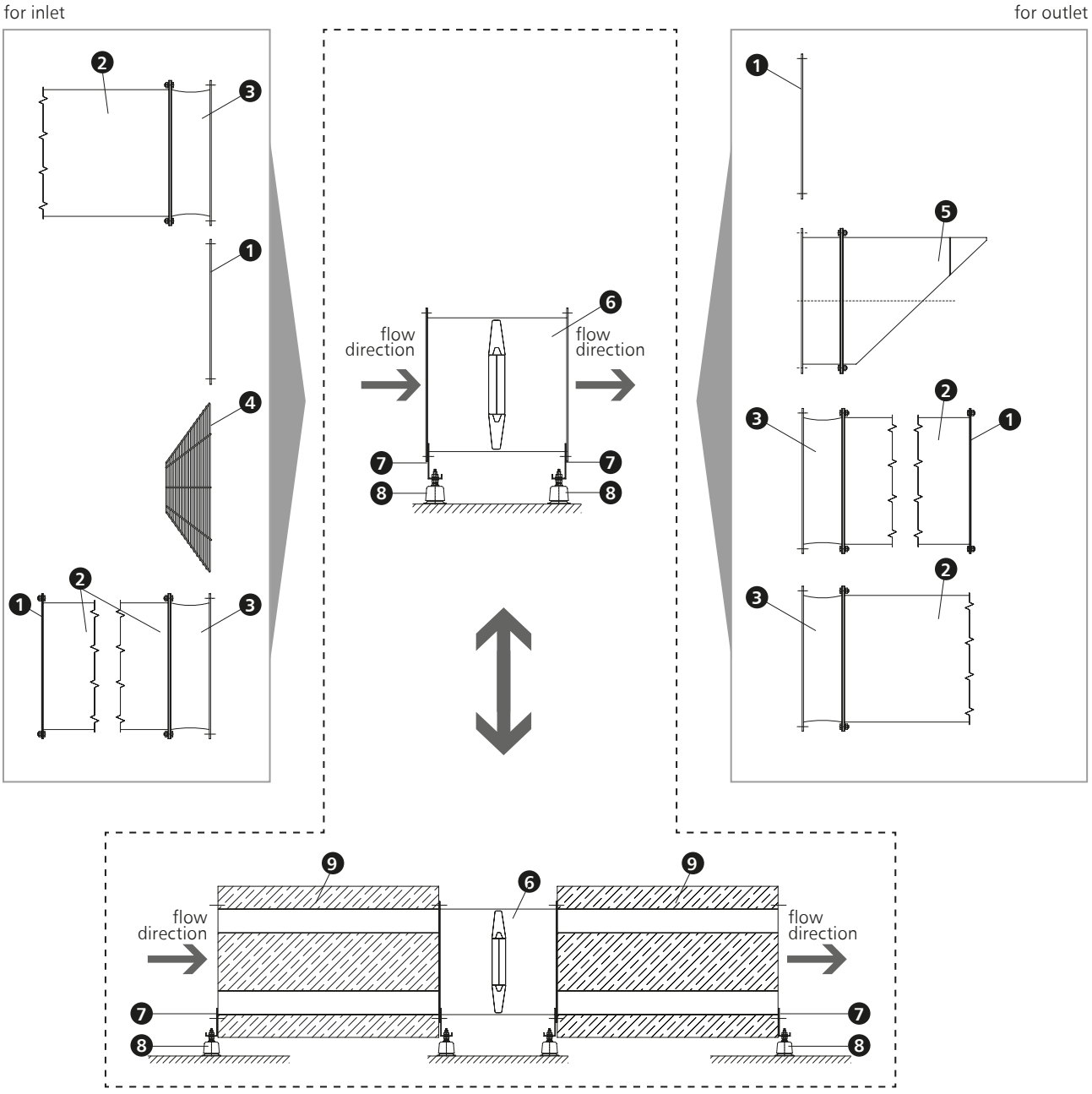
cover grills SOi		
fan	**type**	**motor size**
mcr Monsun R 40	SO-40i	all
mcr Monsun R 45	SO-45i	all
mcr Monsun R 50	SO-50i	all
mcr Monsun R 56	SO-56i	80, 90
mcr Monsun R 56	SO-56i-1	100, 112
mcr Monsun R 63	SO-63i	80, 90
mcr Monsun R 63	SO-63i-1	100, 112
mcr Monsun R 63	SO-63i-2	132
mcr Monsun R 63	SO-63i-3	160
mcr Monsun R 71	SO-71i	80, 90
mcr Monsun R 71	SO-71i-1	100, 112
mcr Monsun R 80	SO-80i	90, 100
mcr Monsun R 80	SO-80i-1	112
mcr Monsun R 80	SO-80i-2	132
mcr Monsun R 90	SO-90i	90
mcr Monsun R 90	SO-90i-1	110, 112
mcr Monsun R 90	SO-90i-2	132
mcr Monsun R 90	SO-90i-3	160
mcr Monsun R 100	SO-100i	112
mcr Monsun R 100	SO-100i-1	132
mcr Monsun R 100	SO-100i-2	160
mcr Monsun R 125	SO-125i	132
mcr Monsun R 125	SO-125i-1	160
mcr Monsun R 125	SO-125i-2	180
mcr Monsun R 125	SO-125i-3	200
mcr Monsun R 125	SO-125i-4	225, 250
mcr Monsun R 140	SO-140i	132, 180
mcr Monsun R 140	SO-140i-1	160, 200
mcr Monsun R 140	SO-140i-2	225, 250
mcr Monsun R 160	SO-160i	132, 180
mcr Monsun R 160	SO-160i-1	160, 200
mcr Monsun R 160	SO-160i-2	225, 250
mcr Monsun R 160	SO-160i-3	280



3.6. installation

The fan may work in horizontal or vertical position, both indoors and outdoors. It may act as an exhaust fan (smoke exhaust) or supply fan depending on the installation type, and also as unidirectional or reversible device depending on the designed function.

3.6.1. sample of fan installation variants in horizontal position

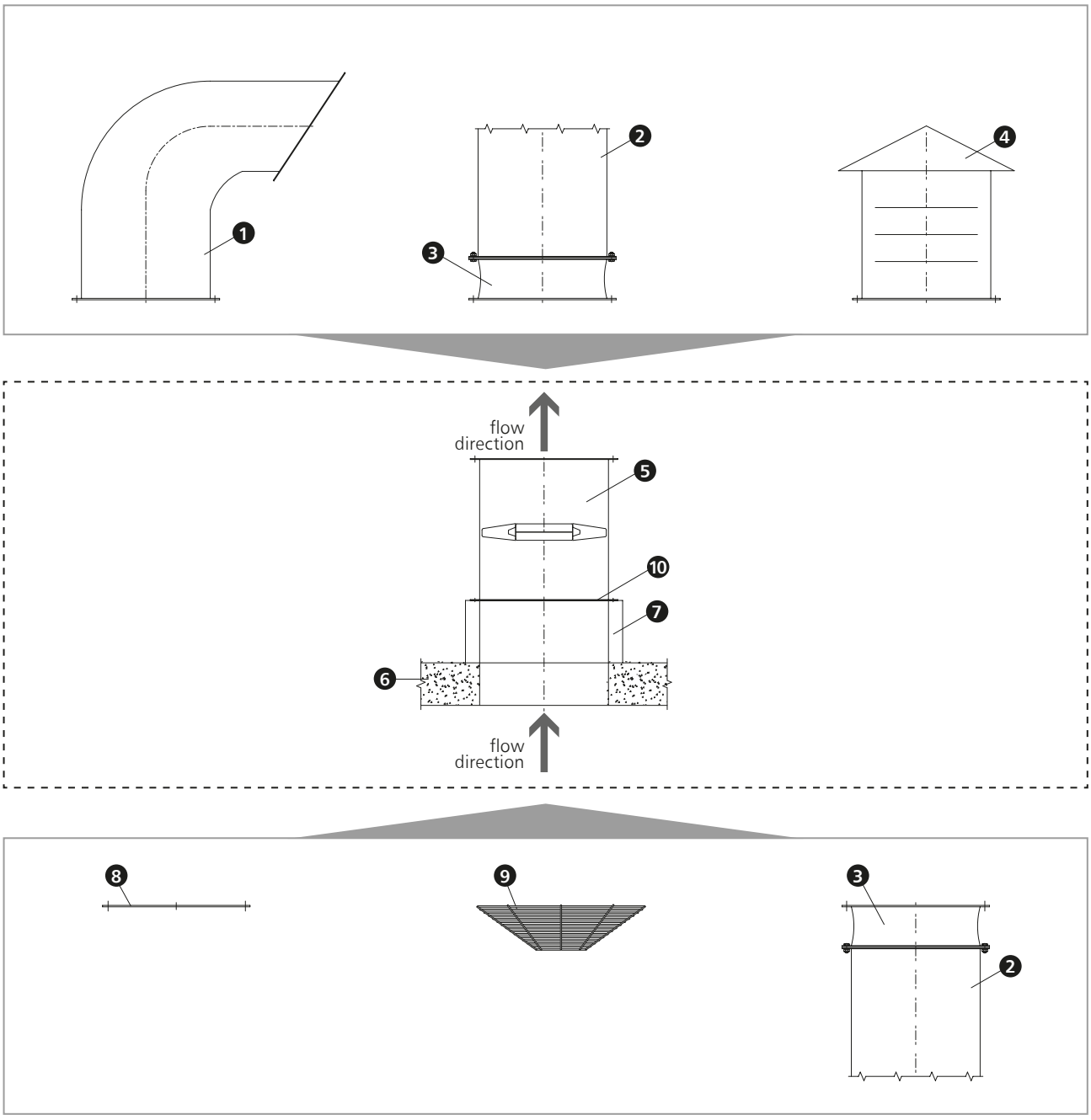


As an option, noise silencers may be installed on the fans (on one or on both sides) and the rest of the equipment as shown in diagram. The fans may be also coupled in a row.

1 - cover grill SOc
2 - ventilation system (duct; not included)
3 - flexible connection KDc with counter flange PKc
4 - cover grill SOi
5 - outlet hood (not included)
6 - mcr Monsun R fan
7 - mounting foot SWc
8 - shock absorber AM
9 - noise silencer THc

3.6.2. sample of fan installation variants in vertical position

for outlet



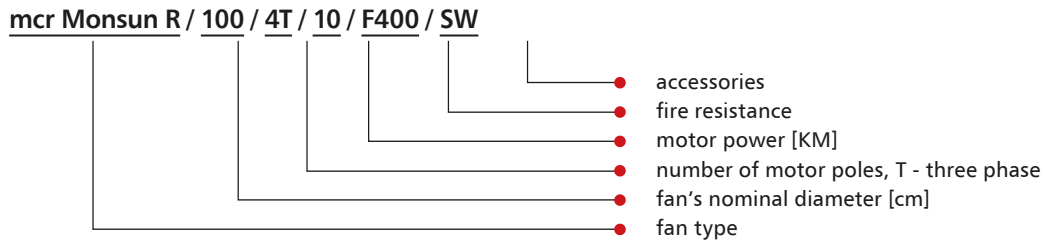
for inlet

As an option, noise silencers may be installed on the fans (on one or on both sides) and the rest of the equipment as shown in diagram. The fans may be also coupled in a row.

1 - outlet connection with grill (not included)
2 - ventilation system (duct; not included)
3 - flexible connection KDc with counter flange PKc
4 - roof outlet hood (not included)
5 - mcr Monsun R fan
6 - ceiling
7 - roof base/pedestal (not included)
8 - cover grill SOc
9 - cover grill SOi
10 - seal or damping mat (not include)

3.7. designation

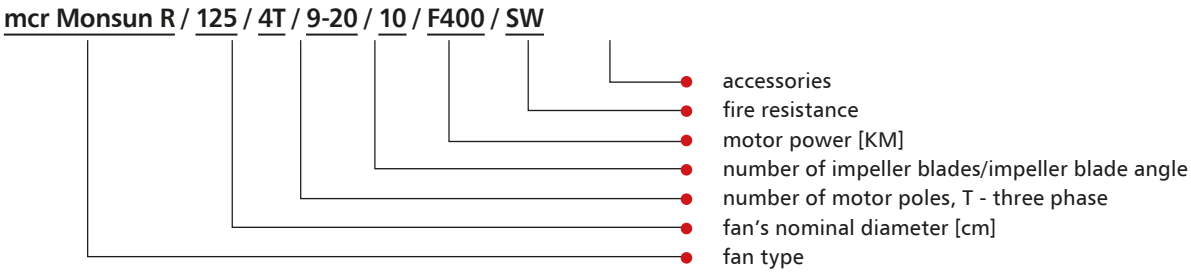
For sizes from 40 to 100



Fan type
mcr Monsun R - fans with short housing 400°C/2h, 300°C/2h
mcr Monsun R/ATEX - fans with short housing 400°C/2h, 300°C/2h, ATEX certified
mcr Monsun R/CL - fans with long housing with revision cover 400°C/2h, 300°C/2h

Fire resistance
F300 – with approval 300°C/1h
F400 – with approval 400°C/2h
CAT3 – ATEX certified to category 3 Ex II3G

For sizes from 125 to 160



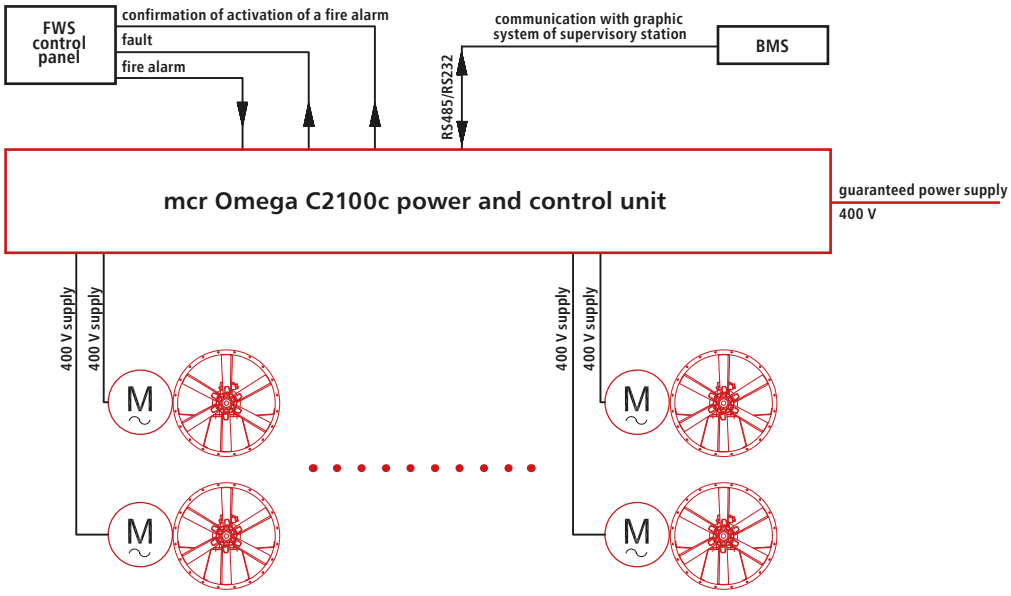
Fan type
mcr Monsun R - fans with short housing 400°C/2h, 300°C/2h
mcr Monsun R/ATEX - fans with short housing 400°C/2h, 300°C/2h, ATEX certified
mcr Monsun R/CL - fans with long housing with revision cover 400°C/2h, 300°C/2h

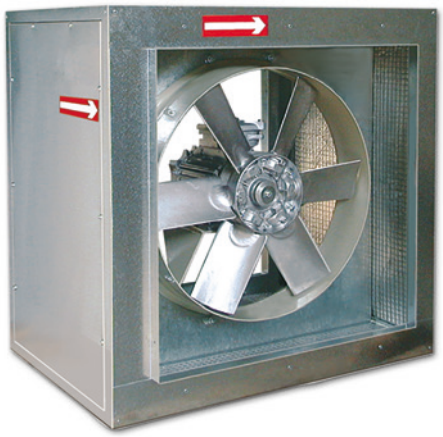
Fire resistance
F300 – with approval 300°C/1h
F400 – with approval 400°C/2h
CAT3 – ATEX certified to category 3 Ex II3G

3.8. 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 Monsun R fans using mcr Omega unit:





CE
0370-CPR-1934

Applus

- **Certificate of constancy of performance 0370-CPR-1934 for F400.**
- **Functional properties according to EN 12101-3:2002+AC:2005.**
- **Fan in heat insulated and soundproof housing.**
- **Reverse operation possible.**
- **For vertical and horizontal installation.**
- **Available in ATEX explosion-proof version.**

4.1. use

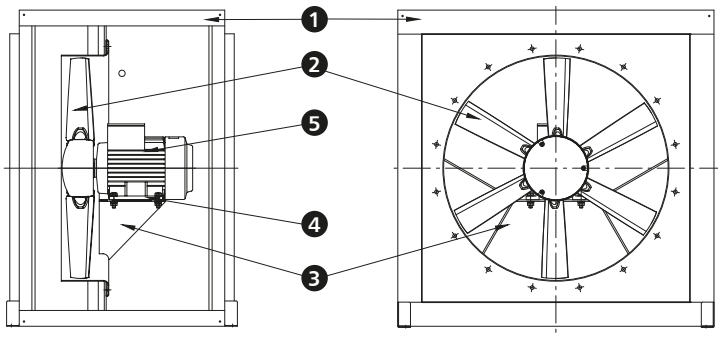
mcr Monsun C axial fans are designed for fire ventilation systems for smoke exhaust and air supply, where heat and sound insulation, reversed operation or explosion-proof design are required. May be also used for comfort ventilation systems as intake or exhaust fans.

The smoke exhaust fans are designed for removing heat, smoke and combustion gases generated in rooms during fire. They facilitate evacuation of people from area on fire and fire fighting procedures by fire brigades. They also protect the building's structure and equipment against effects of high temperatures and stop fire from spreading to adjacent areas.

The devices can be used indoors and outdoors. The smoke exhaust fans are most often used in civic buildings, shopping malls, boarding houses and industrial halls.

The mcr Monsun C fan can feature a two-speed motor and combine comfort ventilation and smoke exhaust functions, e.g. both for ventilation and smoke exhaust in halls and underground garages.

4.2. design



1. fan housing
2. axial impeller
3. motor base support
4. motor base
5. electric motor, fire resistant

The fan's housing is made of galvanised steel sheet and has heat and sound insulation.

As standard, mcr Monsun C has an inspection hatch which permits verification of the impeller sense of rotation and connection of cable to the motor.

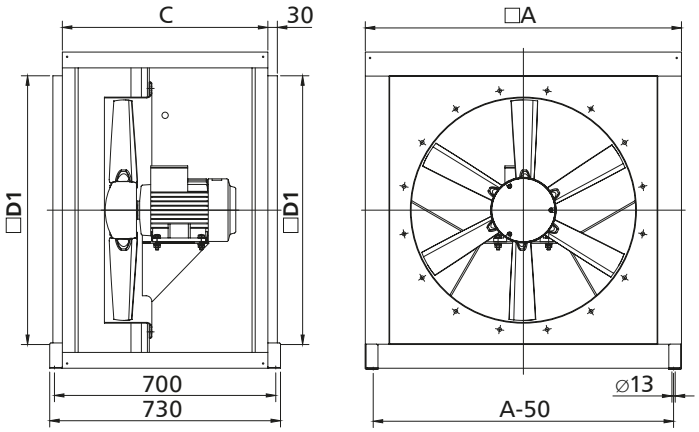
The motor is located and supported by the motor base inside the casing. The impeller with 3, 6 or 9 blades is set directly on the motor pirot.

The fan may be equipped with a three phase motor one- or two-speed with different rotational speeds (3000, 1500, 1000, 750 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. The motor's winding is available in two versions: 230/400 V and 400/690 V. Maximum temperatures of transferred air is: for S1 from -20°C to +40°C, for S2 300°C/2 h, 400°C/2h. The supply cables are connected directly to motor.

The motor is adapted for operation with an inverter.

4.3. dimensions

Depending on the output or installation location the axial fan mcr Monsun C is available in different housing sizes from D400 to D1250.



fan	□A [mm]	C [mm]	□D1 [mm]
mcr Monsun C 40/45/50	700	550	565
mcr Monsun C 56/63	825	550	690
mcr Monsun C 71/80	1000	650	850
mcr Monsun C 90/100	1200	750	1050
mcr Monsun C 125	1600	1200	1400

4.4. technical parameters

4.4.1. motor power

Range of motor power depending on the size of fan and rotational speeds of the impeller.

motor speed n = 750 [rpm]		motor speed n = 1000 [rpm]		motor speed n = 1500 [rpm]		motor speed n = 3000 [rpm]	
size	**power range P [kW]**	**size**	**power range P [kW]**	**size**	**power range P [kW]**	**size**	**power range P [kW]**
80	0.55-0.75	**40**	0.55	**40**	0.55	**40**	1.1-1.5
90	0.75-2.2	**45**	0.55	**45**	0.55	**45**	1.5-2.2
100	1.5-3	**50**	0.55	**50**	0.75	**50**	3-4.5
		56	0.55	**56**	0.75-1.5	**56**	4.5-9
		63	0.55-0.75	**63**	0.75-3		
		71	0.75-1.1	**71**	1.1-3		
		80	1.1-2.2	**80**	2.2-4		
		90	1.5-3	**90**	3-7.5		
		100	2.2-4	**100**	5.5-15		
		125	3-15	**125**	7.5-37		

4.4.2. fire resistance

In accordance with EN 12101-3 mcr Monsun C fan is certified for the following fire resistance:
- class **F400** – fire resistance 400°C/120 min.

4.4.3. technical and flow parameters

one-speed fans

The working parameters of mcr Monsun C fan cover the range from 3000 m³/h for 118000 m³/h at compressions up to 1000 Pa.

size	diameter D [mm]	acoustic pressure [dB A]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	weight of fan m [kg]
40-6T-0.75	400	51	960	0.55	1.9	230/400 Y	49
40-4T-0.75		61	1420	0.55	1.7	230/400 Y	41
45-6T-0.75	450	53	930	0.55	1.9	230/400 Y	51
45-4T-0.75		65	1420	0.55	1.7	230/400 Y	43
50-6T-0.75	500	55	930	0.55	1.9	230/400 Y	52
50-4T-1		66	1420	0.75	2.1	230/400 Y	50
56-6T-0.75	560	60	930	0.55	1.9	230/400 Y	61
56-4T-1		70	1420	0.75	2.1	230/400 Y	59
56-4T-1.5		71	1420	1.1	2.8	230/400 Y	61
56-4T-2		72	1425	1.5	3.8	230/400 Y	63
63-6T-0.75	630	63	930	0.55	1.9	230/400 Y	66
63-6T-1		64	940	0.75	2.6	230/400 Y	67
63-4T-1		70	1420	0.75	2.1	230/400 Y	63
63-4T-1.5		71	1420	1.1	2.7	230/400 Y	66
63-4T-2		72	1425	1.5	3.8	230/400 Y	67
63-4T-3		73	1435	2.2	5.3	230/400 Y	73
63-4T-4		74	1430	3	6.6	230/400 Y	78
71-6T-0.75	710	65	930	0.55	1.9	230/400 Y	82
71-6T-1		66	950	0.75	2.6	230/400 Y	84
71-6T-1.5		67	945	1.1	3.7	230/400 Y	86
71-4T-1.5		75	1420	1.1	2.7	230/400 Y	82
71-4T-2		76	1425	1.5	3.8	230/400 Y	84
71-4T-3		78	1435	2.2	5.3	230/400 Y	90
71-4T-4		79	1430	3	6.6	230/400 Y	95
80-8T-0.75	800	68	700	0.55	2.1	230/400 Y	99
80-8T-1		69	710	0.75	2.8	230/400 Y	111
80-6T-1.5		70	945	1.1	3.7	230/400 Y	95
80-6T-2		71	945	1.5	4.3	230/400 Y	99
80-6T-3		72	935	2.2	5.9	230/400 Y	113
80-4T-3		79	1435	2.2	5.3	230/400 Y	98
80-4T-4		80	1430	3	6.6	230/400 Y	103
80-4T-5.5		81	1440	4	8.4	400 /690 D	113
90-8T-1	900	69	710	0.75	2.8	230/400 Y	135
90-8T-2		71	700	1.5	5.2	230/400 Y	139
90-8T-3		72	710	2.2	7.6	230/400 Y	171
90-6T-2		75	945	1.5	4.3	230/400 Y	123
90-6T-3		76	950	2.2	5.9	230/400 Y	137
90-6T-4		77	970	3	8.7	230/400 Y	171
90-4T-4		84	1430	3	6.6	230/400 Y	127
90-4T-5.5		86	1440	4	8.4	400/690 D/Y	137
90-4T-7.5		88	1460	5.5	11.5	400/690 D/Y	171
90-4T-10		89	1460	7.5	17.7	400/690 D/Y	208
100-8T-2	1000	75	700	1.5	5.2	230/400 Y	147
100-8T-3		75	710	2.2	7.6	230/400 Y	179
100-8T-4		76	710	3	9.0	230/400 Y	216
100-6T-3		80	950	2.2	5.9	230/400 Y	145
100-6T-4		81	970	3	8.7	230/400 Y	179
100-6T-5.5		82	970	4	11.0	400/690 D/Y	187
100-4T-7.5		89	1460	5.5	11.5	400/690 D/Y	179
100-4T-10		90	1460	7.5	17.7	400/690 D/Y	216
100-4T-15		91	1460	11	23.0	400/690 D/Y	251
100-4T-20		92	1460	15	29.0	400/690 D/Y	258

one-speed fans

size	diameter D [mm]	acoustic pressure [dB A]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	weight of fan m [kg]
125-4T/3-10	1250	85	1465	7.5	17.7	400/690 D/Y	395
125-4T/3-15		86	1460	11	23.0	400/690 D/Y	450
125-4T/3-20		88	1455	15	29.0	400/690 D/Y	457
125-4T/3-25		88	1470	18.5	37.0	400/690 D/Y	540
125-4T/3-30		89	1470	22	42.0	400/690 D/Y	545
125-4T/3-40		90	1475	30	58.0	400/690 D/Y	598
125-4T/6-20		86	1455	15	29.0	400/690 D/Y	466
125-4T/6-25		87	1470	18.5	37.0	400/690 D/Y	549
125-4T/6-30		87	1470	22	42.0	400/690 D/Y	554
125-4T/6-40		89	1475	30	58.0	400/690 D/Y	606
125-4T/6-50		90	1480	37	73.0	400/690 D/Y	734
125-4T/9-25		85	1470	18.5	37.0	400/690 D/Y	558
125-4T/9-30		86	1470	22	42.0	400/690 D/Y	563
125-4T/9-40		88	1475	30	58.0	400/690 D/Y	615
125-4T/9-50		90	1480	37	73.0	400/690 D/Y	743
125-6T/3-4		77	960	3	8.7	230/400 Y	385
125-6T/3-5.5		78	940	4	11.0	400/690 D/Y	393
125-6T/3-7.5		79	960	5.5	14.0	400/690 D/Y	401
125-6T/3-10		81	970	7.5	18.6	400/690 D/Y	449
125-6T/3-15		82	970	11	26.0	400/690 D/Y	466
125-6T/3-20		83	970	15	35.5	400/690 D/Y	533
125-6T/6-5.5		75	940	4	11.0	400/690 D/Y	402
125-6T/6-7.5		75	960	5.5	14.0	400/690 D/Y	410
125-6T/6-10		77	970	7.5	18.6	400/690 D/Y	458
125-6T/6-15		79	970	11	26.0	400/690 D/Y	475
125-6T/6-20		80	970	15	35.5	400/690 D/Y	542
125-6T/9-10		76	970	7.5	18.6	400/690 D/Y	467
125-6T/9-15		79	970	11	26.0	400/690 D/Y	484
125-6T/9-20		82	975	15	35.5	400/690 D/Y	551

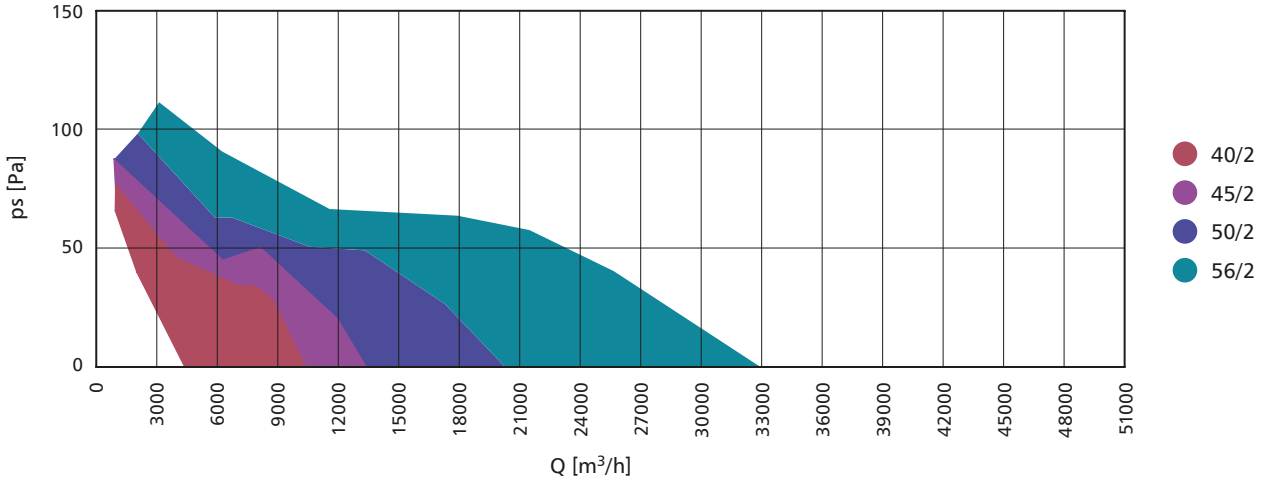
two-speed fans

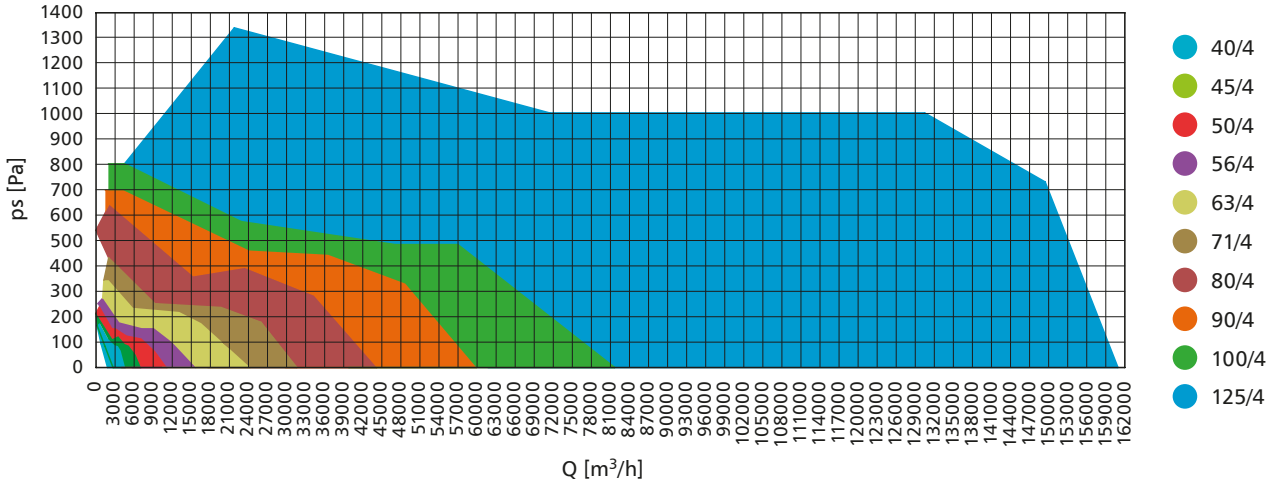
size	diameter D [mm]	acoustic pressure [dB A]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	weight of fan m [kg]
40-6/12T-0.75	400	51/36	940/440	0.55/0.9	2.10/0.90	400/400 Y	53
40-2/4T-1.5		73/58	2920/1460	1.10/0.25	2.90/2.10	400/400 Y	50
40-2/4T-2		74/59	2940/1460	1.50/0.37	4.40/1.40	400/400 Y	51
45-6/12T-0.75	450	51/36	940/440	0.55/0.09	2.10/0.90	400/400 Y	53
45-2/4T-2		75/60	2940/1460	1.50/0.37	4.40/1.40	400/400 Y	53
45-2/4T-3		77/62	2930/1450	2.20/0.60	5.70/1.80	400/400 Y	55
50-6/12T-0.75	500	53/38	940/440	0.55/0.09	2.10/0.90	400/400 Y	55
50-2/4T-4		79/64	2920/1440	3.00/0.80	6.70/2.00	400/400 Y	62
50-2/4T-6		80/65	2930/1450	4.50/1.30	10.00/3.20	400/400 Y	78
56-6/12T-0.75	560	55/40	940/440	0.55/0.09	2.10/0.90	400/400 Y	56
56-4/8T-1.5		71/56	1440/710	1.10/0.25	2.90/1.40	400/400 Y	65
56-4/8T-2		72/57	1415/715	1.50/0.30	3.60/1.50	400/400 Y	69
56-2/4T-6		85/69	2930/1450	4.50/1.30	10.00/3.20	400/400 Y	87
56-2/4T-12		86/71	2920/1440	9.00/2.50	18.50/5.50	400/400 Y	153
63-6/12T-0.75	630	63/48	940/440	0.55/0.09	2.10/0.90	400/400 Y	69
63-6/12T-1		64/49	935/430	0.75/0.15	2.50/1.03	400/400 Y	71
63-4/8T-1.5		71/56	1440/710	1.10/0.25	2.90/1.40	400/400 Y	69
63-4/8T-2		72/57	1415/715	1.50/0.30	3.60/1.50	400/400 Y	74
63-4/8T-3		73/58	1415/715	2.20/0.45	5.20/1.90	400/400 Y	87
63-4/8T-4		74/59	1425/710	3.00/0.60	6.90/2.30	400/400 Y	91

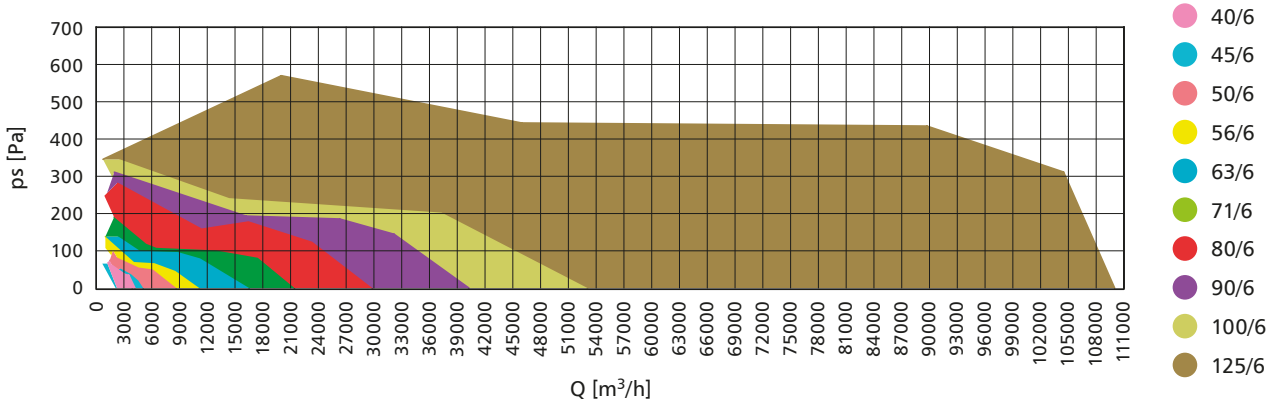
two-speed fans

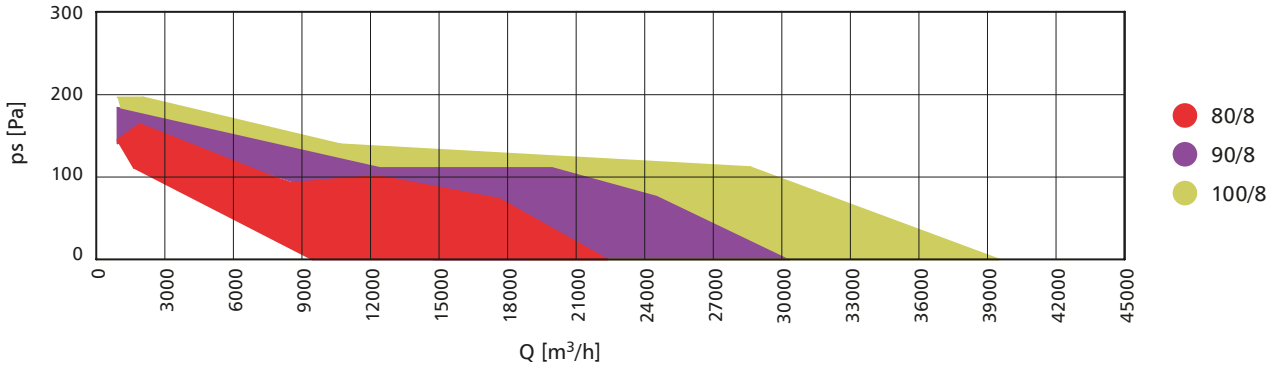
size	diameter D [mm]	acoustic pressure [dB A]	speed [1/min]	power (electric) P [kW]	current intensity I max [A]	voltage U [V]	weight of fan m [kg]
71-6/12T-0.75	710	65/50	940/440	0.55/0.09	2.10/0.90	400/400 Y	86
71-6/12T-1		66/51	935/430	0.75/0.15	2.50/1.03	400/400 Y	87
71-6/12T-1.5		67/52	940/450	1.10/0.18	3.00/1.20	400/400 Y	97
71-4/8T-1.5		75/60	1440/710	1.10/0.25	2.90/1.40	400/400 Y	86
71-4/8T-2		76/61	1415/715	1.50/0.30	3.60/1.50	400/400 Y	91
71-4/8T-3		78/63	1415/715	2.20/0.45	5.20/1.90	400/400 Y	103
71-4/8T-4		79/64	1420/705	3.00/0.60	6.90/2.30	400/400 Y	108
80-6/12T-1.5	800	70/55	940/450	1.10/0.18	3.30/1.20	400/400 Y	105
80-6/12T-2		71/56	960/470	1.50/0.25	4.30/1.70	400/400 Y	113
80-6/12T-3		72/57	940/470	2.20/0.37	5.60/2.20	400/400 Y	118
80-4/8T-3		79/64	1415/715	2.20/0.45	5.20/1.90	400/400 Y	111
80-4/8T-4		80/65	1425/710	3.00/0.60	6.90/2.30	400/400 Y	115
80-4/8T-5.5		81/66	1455/725	4.00/0.80	9.40/3.50	400/400 Y	147
90-6/12T-2	900	75/60	960/470	1.50/0.25	4.30/1.70	400/400 Y	137
90-6/12T-3		76/61	940/470	2.20/0.37	5.60/2.20	400/400 Y	142
90-6/12T-4		77/62	970/475	3.00/0.55	8.90/3.50	400/400 Y	171
90-4/8T-4		84/69	1425/710	3.00/0.60	6.90/2.30	400/400 Y	139
90-4/8T-5.5		86/71	1455/725	4.00/0.80	9.40/3.50	400/400 Y	171
90-4/8T-7.5		88/73	1455/725	5.50/1.10	12.80/4.60	400/400 Y	190
90-4/8T-9		89/74	1455/725	6.70/1.50	15.50/5.50	400/400 Y	198
100-6/12T-3	1000	80/65	940/470	2.20/0.37	5.60/2.20	400/400 Y	150
100-6/12T-4		81/66	970/475	3.00/0.55	8.90/3.50	400/400 Y	179
100-6/12T-5.5		82/67	970/480	4.00/0.65	11.30/4.20	400/400 Y	206
100-4/8T-7.5		89/74	1455/725	5.50/1.10	12.80/4.60	400/400 Y	198
100-4/8T-9		90/75	1455/725	6.70/1.50	15.50/5.50	400/400 Y	206
100-4/8T-15		91/76	1470/725	11.00/2.80	23.20/8.70	400/400 Y	251
100-4/8T-20		92/77	1470/725	15.00/3.80	31.70/11.80	400/400 Y	258
125-4/8T/3-9	1250	85/65	1430/725	7.20/1.80	14.40/4.64	400/400 Y	409
125-4/8T/3-15		86/66	1455/725	11.00/2.80	21.00/7.00	400/400 Y	456
125-4/8T/3-20		88/68	1455/725	14.00/3.50	26.50/8.45	400/400 Y	476
125-4/8T/3-27		89/68	1470/730	20.00/4.00	38.00/13.00	400/400 Y	548
125-4/8T/3-37		90/69	1475/735	27.00/6.00	51.00/20.60	400/400 Y	625
125-4/8T/3-40		90/69	1470/730	30.00/10.00	62.00/27.00	400/400 Y	638
125-4/8T/6-20		86/65	1455/725	15.00/3.80	31.70/11.80	400/400 Y	485
125-4/8T/6-22		86/66	1475/730	16.50/3.30	31.80/12.00	400/400 Y	555
125-4/8T/6-27		87/66	1470/735	20.00/4.00	38.00/13.00	400/400 Y	557
125-4/8T/6-37		87/67	1480/735	27.00/6.00	51.00/20.60	400/400 Y	633
125-4/8T/6-40		89/68	1480/735	30.00/10.00	62.00/27.00	400/400 Y	646
125-4/8T/9-22		85/66	1470/735	16.50/3.30	31.80/12.00	400/400 Y	564
125-4/8T/9-27		86/67	1470/735	20.00 /5.00	38.00/13.00	400/400 Y	566
125-4/8T/9-37		87/67	1475/735	27.00/6.00	51.00/20.60	400/400 Y	642
125-4/8T/9-40		88/68	1480/735	30.00/10.00	62.00/27.00	400/400 Y	655
125-6/12T/3-4		77/62	970/475	3.00/0.55	8.90/3.50	400/400 Y	401
125-6/12T/3-5.5		78/63	970/480	4.00/0.65	11.30/4.20	400/400 Y	432
125-6/12T/3-7.5		79/64	970/480	5.50/1.00	13.70/5.60	400/400 Y	445
125-6/12T/3-10		81/66	970/480	7.50/1.40	19.00/8.00	400/400 Y	457
125-6/12T/3-15		82/67	970/470	11.00/2.00	28.50/13.00	400/400 Y	557
125-6/12T/3-24		83/68	970/480	17.50/3.50	36.00/14.50	400/400 Y	623
125-6/12T/6-5.5		75/60	970/480	4.00/0.65	11.30/4.20	400/400 Y	441
125-6/12T/6-7.5		75/60	970/480	5.50/1.00	13.70/5.60	400/400 Y	454
125-6/12T/6-10		77/62	970/480	7.50/1.40	19.00/8.00	400/400 Y	466
125-6/12T/6-15		79/64	970/470	11.00/2.00	19.00/8.00	400/400 Y	566
125-6/12T/6-24		80/65	970/480	17.50/3.50	36.00/14.50	400/400 Y	631
125-6/12T/9-10		76/61	970/480	7.50/1.40	19.00/8.00	400/400 Y	475
125-6/12T/9-15		79/64	970/470	11.00/2.00	28.50/13.00	400/400 Y	575
125-6/12T/9-24		84/69	970/480	17.50/3.50	36.00/14.50	400/400 Y	640

Q - capacity [m³/h]
ps - static pressure [Pa]









4.4.4. acoustic parameters

The supplied data refer to measurement of sound pressure and loudness level carried out in a free area at the distance equal to two lengths of the housing plus impeller's diameter but not smaller than 1.5 m.

size	sound pressure level [dB A]							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
40-2-1.5	48	69	76	81	84	80	73	62
40-2-2	49	70	77	82	85	81	74	63
40-4-0.75	36	57	64	69	72	68	61	50
40-4-1.5	33	54	61	66	69	65	58	47
40-4-2	34	55	62	67	70	66	59	48
40-6	25	46	53	58	61	57	50	39
40-12	10	31	38	43	46	42	35	24
45-2-2	50	71	78	83	86	82	75	64
45-2-3	52	73	80	85	88	84	77	66
45-4-0.75	40	61	68	73	76	72	65	54
45-4-2	35	56	63	68	71	67	60	49
45-4-3	37	58	65	70	73	69	62	51
45-6	27	48	55	60	63	59	52	41
45-12	12	33	40	45	48	44	37	26
50-2-4	57	77	85	90	92	89	82	71
50-2-5.5	58	78	86	91	93	90	83	72
50-2-6	58	78	86	91	93	90	83	72
50-4-1	44	64	72	77	79	76	69	58
50-4-4	42	62	70	75	77	74	67	56
50-4-6	43	63	71	76	78	75	68	57
50-6	32	52	60	65	67	64	57	46
50-12	17	37	45	50	52	49	42	31
50-2-5.5	63	83	91	96	98	95	88	77
56-2-6	63	83	91	96	98	95	88	77
56-2-12	64	84	92	97	99	96	89	78
56-4-1	48	68	76	81	83	80	73	62
56-4-1.5	49	69	77	82	84	81	74	63
56-4-2	50	70	78	83	85	82	75	64
56-4-6	48	68	76	81	83	80	73	62
56-4-12	49	69	77	82	84	81	74	63
56-6	37	57	65	70	72	69	62	51
56-8-1.5	34	54	62	67	69	66	59	48
56-8-2	35	55	63	68	70	67	60	49
56-12	22	42	50	55	57	54	47	36
63-2-12	67	87	95	100	102	99	92	81
63-2-22	68	88	96	101	103	100	93	82
63-4-1	50	70	78	83	85	82	75	64
63-4-1.5	48	68	76	81	83	80	73	65
63-4-2	52	68	76	81	83	80	73	66
63-4-3	53	70	78	83	85	82	77	67
63-4-4	54	71	79	84	86	83	78	68
63-4-12	52	72	80	85	87	84	77	66
63-4-22	53	73	81	86	88	85	78	67
63-6-0.75	42	60	68	73	75	72	65	56
63-6-1	43	62	70	75	77	74	67	57
63-8-1.5	33	53	61	66	68	65	58	50
63-8-2	37	53	61	66	68	65	58	51
63-8-3	38	55	63	68	70	67	62	52
63-8-4	39	56	64	69	71	68	63	53
63-12-0.75	27	43	51	56	58	55	48	37
63-12-1	28	45	53	58	60	57	50	42

size	sound pressure level [dB A]							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
71-4-1.5	54	74	82	87	89	86	79	69
71-4-2	53	73	81	86	88	85	78	70
71-4-3	58	72	80	85	87	84	77	71
71-4-4	59	73	81	86	88	85	78	72
71-6-0.75	44	63	72	74	76	73	66	55
71-6-1	45	65	73	75	77	74	67	56
71-6-1.5	46	66	71	76	78	75	68	57
71-8-1.5	38	58	66	71	73	70	63	54
71-8-2	38	58	66	71	73	70	63	55
71-8-3	43	57	65	70	72	69	62	56
71-8-4	44	58	66	71	73	70	63	57
71-12-0.75	29	44	52	57	59	56	49	38
71-12-1	30	46	54	59	61	58	51	40
71-12-1.5	31	46	54	59	61	58	51	40
80-4-3	57	77	85	90	92	89	82	73
80-4-4	56	76	84	89	91	88	81	74
80-4-5.5	56	76	84	89	91	88	81	70
80-6-1.5	49	66	74	79	81	78	71	60
80-6-2	50	67	75	80	82	79	72	61
80-6-3	51	68	76	81	83	80	73	62
80-8-0.75	47	60	68	73	75	72	65	54
80-8-1	48	61	69	74	76	73	66	55
80-8-3	42	62	70	75	77	74	67	58
80-8-4	41	61	69	74	76	73	66	59
80-8-5.5	40	60	68	73	75	72	65	59
80-12-1.5	34	49	57	62	64	61	54	43
80-12-2	35	50	58	63	65	62	55	44
80-12-3	36	51	59	64	66	63	56	45
90-4-4	61	82	89	94	97	93	86	79
90-4-5.5	60	81	88	93	96	92	85	74
90-4-7.5	59	80	87	92	95	91	84	73
90-4-9	58	79	86	91	94	90	83	72
90-4-10	58	79	86	91	94	90	83	72
90-6-2	49	70	77	82	85	81	74	63
90-6-3	56	70	77	82	85	81	74	63
90-6-4	57	72	79	84	87	83	76	65
90-8-1	42	63	70	75	78	74	67	56
90-8-2	51	66	73	78	81	77	70	59
90-8-3	52	66	73	78	81	77	70	59
90-8-4	46	67	74	79	82	78	71	64
90-8-5.5	45	66	73	78	81	77	70	59
90-8-7.5	43	64	71	76	79	75	68	57
90-8-9	43	64	71	76	79	75	68	57
90-12-2	32	53	60	65	68	64	57	46
90-12-3	41	53	60	65	68	64	57	46
90-12-4	42	55	62	67	70	66	59	48

size	sound pressure level [dB A]							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
100-4-7.5	64	84	92	97	99	96	89	78
100-4-9	63	83	91	96	98	95	88	77
100-4-10	62	82	90	95	97	94	87	76
100-4-15	61	81	89	94	96	93	86	75
100-4-20	63	83	91	96	98	95	88	77
100-6-3	61	72	80	85	87	84	77	66
100-6-4	64	72	80	85	87	84	77	66
100-6-5.5	64	73	81	86	88	85	78	67
100-8-2	56	66	74	79	81	78	71	60
100-8-3	57	68	76	81	83	80	73	62
100-8-4	58	68	76	81	83	80	73	62
100-8-7.5	49	69	77	82	84	81	74	63
100-8-9	48	68	76	81	83	80	73	62
100-8-15	46	66	74	79	81	78	71	60
100-8-20	47	67	75	80	82	79	72	61
100-12-3	46	55	63	68	70	67	60	49
100-12-4	48	55	63	68	70	67	60	49
100-12-5.5	49	56	64	69	71	68	61	50
125-4/3-9	70	76	88	98	98	94	86	82
125-4/3-10	70	76	88	98	98	94	86	82
125-4/3-15	71	77	89	99	99	95	87	83
125-4/3-20	73	79	91	101	101	97	89	85
125-4/3-25	73	79	91	101	101	97	89	85
125-4/3-27	74	80	92	102	102	98	90	86
125-4/3-30	74	80	92	102	102	98	90	86
125-4/3-37	75	81	93	103	103	99	91	87
125-4/3-40	75	81	93	103	103	99	91	87
125-6/3-5.5	66	74	86	90	88	83	74	70
125-6/3-7.5	67	75	87	91	89	84	75	71
125-6/3-10	69	77	89	93	91	86	77	73
125-6/3-15	70	78	90	94	92	87	78	74
125-6/3-20	71	79	91	95	93	88	79	75
125-6/3-24	71	79	91	95	93	88	79	75
125-8/3-9	50	56	68	78	78	74	66	62
125-8/3-15	51	57	69	79	79	75	67	63
125-8/3-20	53	59	71	81	81	77	69	65
125-8/3-27	53	59	71	81	81	77	69	65
125-8/3-37	54	60	72	82	82	78	70	66
125-8/3-40	54	60	72	82	82	78	70	66
125-6/3-4	65	73	85	89	87	82	73	69
125-12/3-4	50	58	70	74	72	67	58	54
125-12/3-5.5	51	59	71	75	73	68	59	55
125-12/3-7.5	52	60	72	76	74	69	60	56
125-12/3-10	54	62	74	78	76	71	62	58

size	sound pressure level [dB A]							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
125-12/3-15	55	63	75	79	77	72	63	59
125-12/3-24	56	64	76	80	78	73	64	60
125-4/6-20	67	75	91	98	100	95	89	85
125-4/6-22	67	75	91	98	100	95	89	85
125-4/6-25	68	76	92	99	101	96	90	86
125-4/6-27	68	76	92	99	101	96	90	86
125-4/6-30	68	76	92	99	101	96	90	86
125-4/6-37	68	76	92	99	101	96	90	86
125-4/6-40	70	78	94	101	103	98	92	88
125-4/6-50	71	79	95	102	104	99	93	89
125-6/6-5.5	60	69	82	85	86	83	72	68
125-6/6-7.5	60	69	82	85	86	83	72	68
125-6/6-10	62	71	84	87	88	85	74	70
125-6/6-15	64	73	86	89	90	87	76	72
125-6/6-20	65	74	87	90	91	88	77	73
125-6/6-24	65	74	87	90	91	88	77	73
125-8/6-20	46	54	70	77	79	74	68	64
125-8/6-22	47	55	71	78	80	75	69	65
125-8/6-27	47	55	71	78	80	75	69	65
125-8/6-37	48	56	72	79	81	76	70	66
125-8/6-40	49	57	73	80	82	77	71	67
125-12/6-5.5	45	54	67	70	71	68	57	53
125-12/6-7.5	45	54	67	70	71	68	57	53
125-12/6-10	47	56	69	72	73	70	59	55
125-12/6-15	49	58	71	74	75	72	61	57
125-12/6-24	50	59	72	75	76	73	62	58
125-4/9-22	66	74	91	97	98	93	88	84
125-4/9-25	66	74	91	97	98	93	88	84
125-4/9-27	67	75	92	98	99	94	89	85
125-4/9-30	67	75	92	98	99	94	89	85
125-4/9-37	68	76	93	99	100	95	90	86
125-4/9-40	69	77	94	100	101	96	91	87
125-4/9-50	71	79	96	102	103	98	93	89
125-6/9-10	58	68	83	87	86	85	74	70
125-6/9-15	61	71	86	90	89	88	77	73
125-6/9-20	64	74	89	93	92	91	80	76
125-6/9-24	64	74	89	93	92	91	80	76
125-8/9-22	47	55	72	78	79	74	69	65
125-8/9-27	48	56	73	79	80	75	70	66
125-8/9-37	48	56	73	79	80	75	70	66
125-8/9-40	49	57	74	80	81	76	71	67
125-12/9-10	43	53	68	72	71	70	59	55
125-12/9-15	46	56	71	75	74	73	62	58
125-12/9-24	49	59	74	78	77	76	65	61

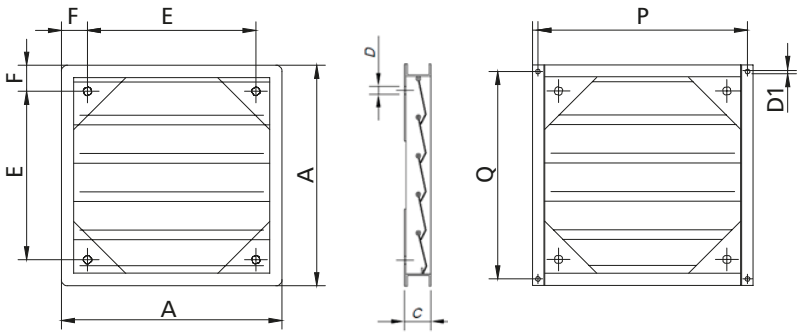
4.5. accessories

4.5.1. multi-blade back draft dampers P-400 - overpressure type, certified up to 400°C/2h

The multi-blade back draft dampers P-400 are supplied as assembled in housing with the correct adapter. May be used as return damper. The frame of a multi-blade back draft damper is made of steel sheet and lamellas are made of sheet aluminium.

The multi-blade back draft dampers may also be used for different uses 400°C/2h in accordance with EN-12101-3-2002 and certificate of constancy of performance.

multi-blade back draft dampers P-400								
type	**A [mm]**	**C [mm]**	**⌀D [mm]**	**E [mm]**	**F [mm]**	**P [mm]**	**Q [mm]**	**D1 [mm]**
P-400-56	645	51	6	492	76.5	595	595	10
P-400-63	760	72	6	580	90	720	720	10
P-400-80	915	72	6	715	100	880	880	10
P-400-100	1115	72	6	895	100	1080	1080	10

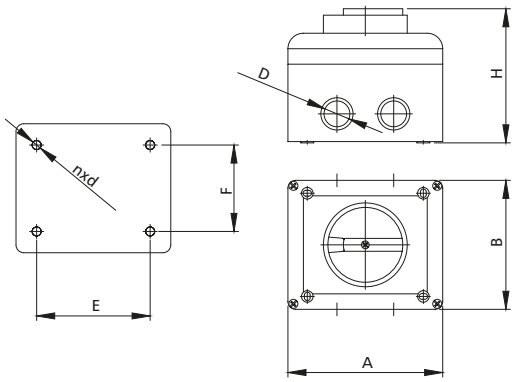


4.5.2. service switches WS

The service switch WS is designed for cutting off power from fan for the period of servicing. The switch has an extra auxiliary contact for signaling the cut-off position in case of not returning the switch to original position, i.e. power supply to fan active after service inspection. For installation directly on the fan's housing, use special support bracket WW.

The 3-pole service switch is designed for one-speed 230/400 V Y motors and the 6-pole switch for one- and two-speed motors rated at 400/690 V D/Y and two-speed motors rated at 230/400 V.

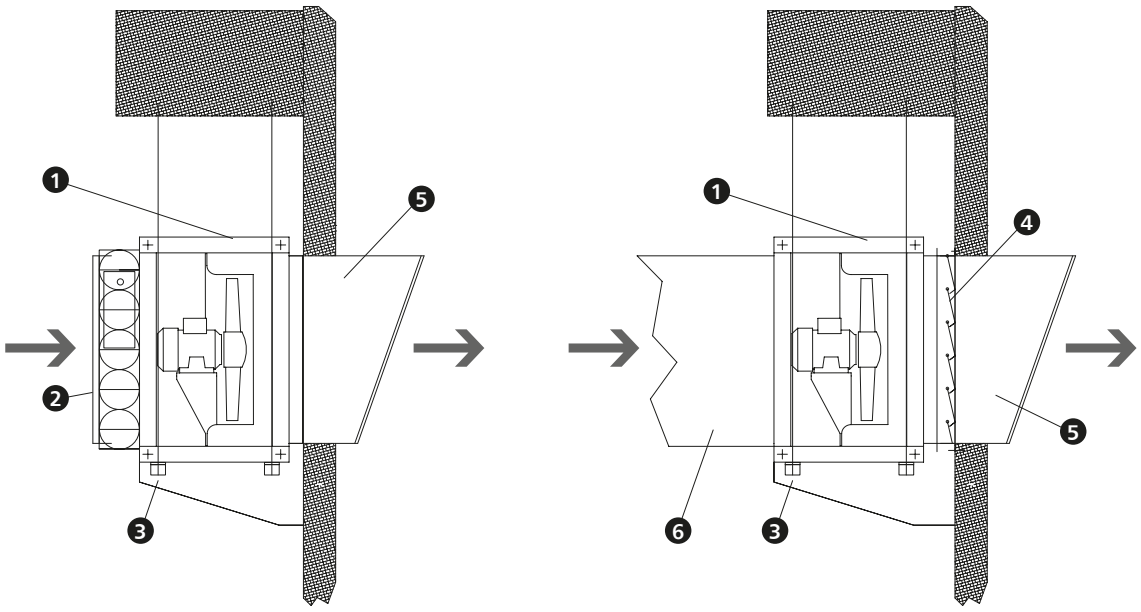
service switches WS										
type	**A [mm]**	**B [mm]**	**E [mm]**	**F [mm]**	**H [mm]**	**nxd [mm]**	**U [V]**	**I [A]**	**glands D [mm]**	**comments**
WS-16/3	90	90	67	48	95	4x4	690	16	M20[x4]	3-pole
WS-16/6	90	90	67	48	95	4x4	690	16	M20[x4]	3-pole
WS-32/6	116	100	90	52	108	4x4	690	32	M25[x4]	6-pole
WS-63/6	170	155	105	95	185	4x6	690	63	M25/M32[x4]	6-pole
WS-100/6	200	180	130	125	200	4x6	690	100	M25/M40[x4]	6-pole



4.6. installation

The fan is capable of operation both in horizontal and vertical orientation.

4.6.1. sample of fan horizontal installation at the end of the system



1 - mcr Monsun C smoke exhaust fan
2 - high temperature damper with actuator and protective grill (not included)
3 - installation profiles with rubber or wall console (not included)
4 - multi-blade back draft damper P-400
5 - outlet hood (not included)
6 - system/duct (not included)

mcr Monsun C 40/45/50 - outlet hood 565x565
mcr Monsun C 56/63 - outlet hood 690x690
mcr Monsun C 71/80 - outlet hood 850x850
mcr Monsun C 90/100 - outlet hood 1050x1050
mcr Monsun C 125 - outlet hood 1400x1400

4.7. designation

For sizes from 40 to 100

mcr Monsun C / 71 / 4T / 10 / F400 / WS

- WS – accessories
- F400 – fire resistance
- 10 – motor power [KM]
- 4T – number of motor poles, T - three phase
- 71 – fan's nominal diameter [cm]
- mcr Monsun C – fan type

Fan type
mcr Monsun C – fans with insulated housing 400°C/2h
mcr Monsun C/ATEX – fans with insulated housing, ATEX certified 400°C/2h

Fire resistance
F400 – with approval 400°C/2h
CAT3 – ATEX certified 3 Ex II3G

For size 125

mcr Monsun C / 125 / 4T / 9-20 / 10 / F400 / WS

- WS – accessories
- F400 – fire resistance
- 10 – motor power [KM]
- 9-20 – number of impeller blades/impeller blade angle
- 4T – number of motor poles, T - three phase
- 125 – fan's nominal diameter [cm]
- mcr Monsun C – fan type

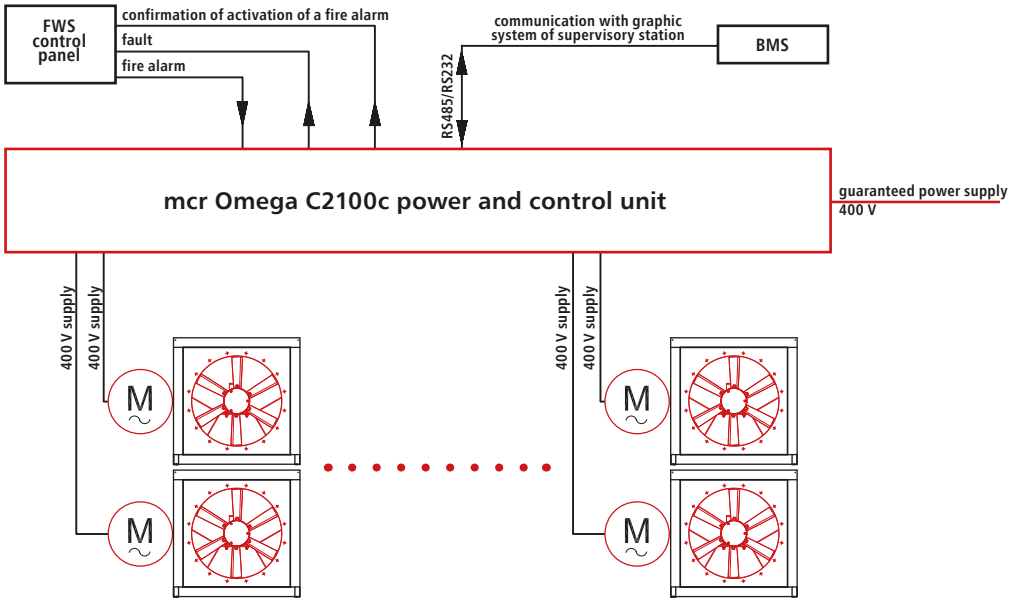
Fan type
mcr Monsun C – fans with insulated housing 400°C/2h
mcr Monsun C/ATEX – fans with insulated housing, ATEX certified 400°C/2h

Fire resistance
F400 – with approval 400°C/2h
CAT3 – ATEX certified 3 Ex II3G

4.8. 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 Monsun C fans using mcr Omega unit:



PRODUCT CONFIGURATOR AT WWW.MERCOR.COM.PL

CE 0370-CPR-1935

CE 0370-CPR-1933

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.**

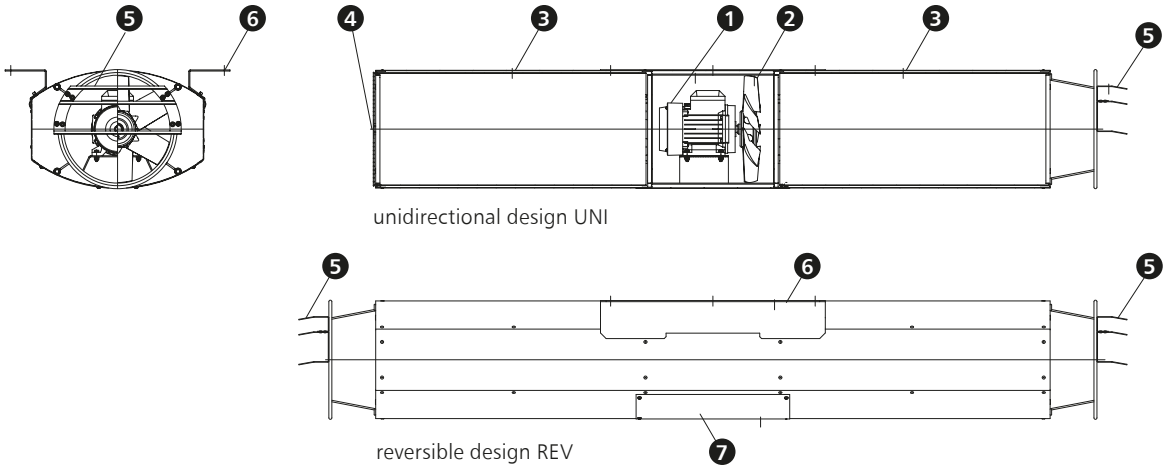
5.1. use

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

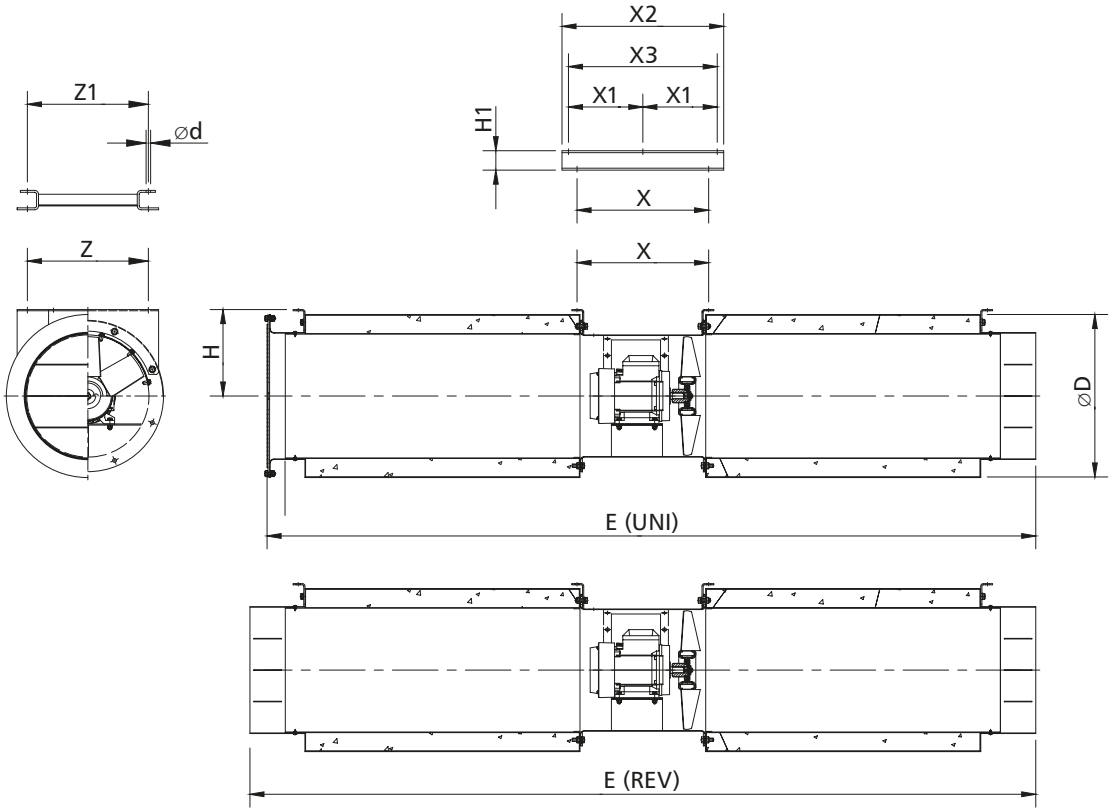
mcr Bora can operate in the following modes:
– unidirectional – **UNI**
– reversible – **REV**

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

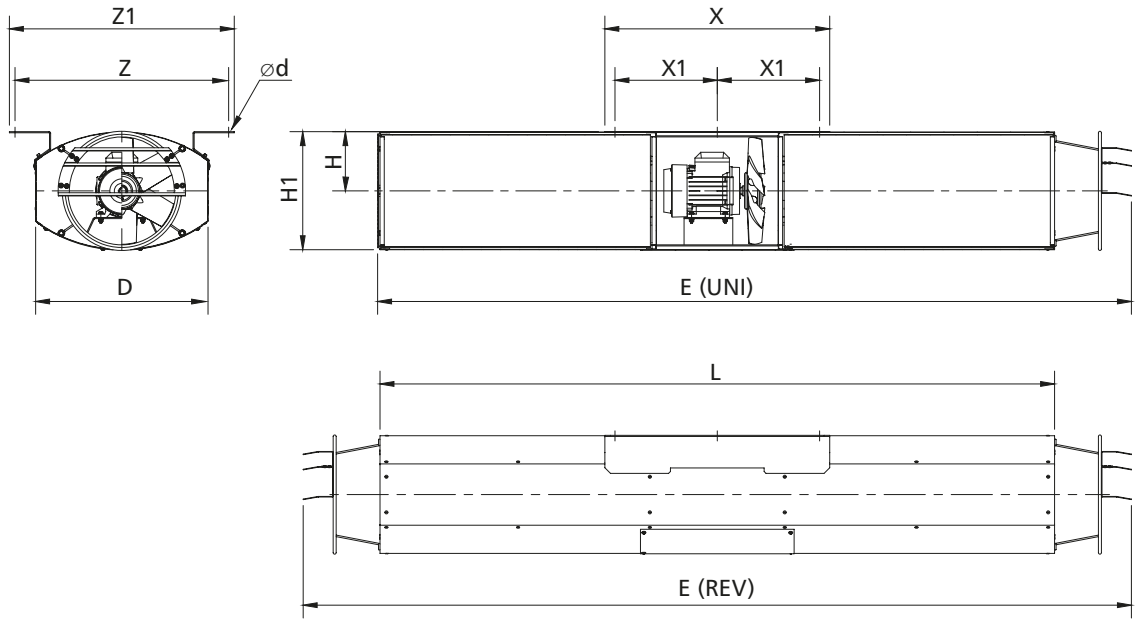
Depending on the housing version the jet fan mcr Bora is available in different housing sizes from Ø 290 to Ø 450 (up to Ø 800 on request).

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

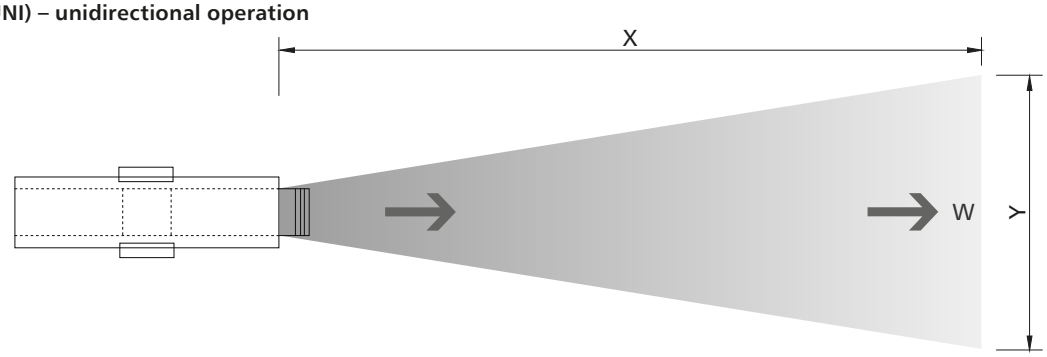
5.4.1. fire resistance

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.

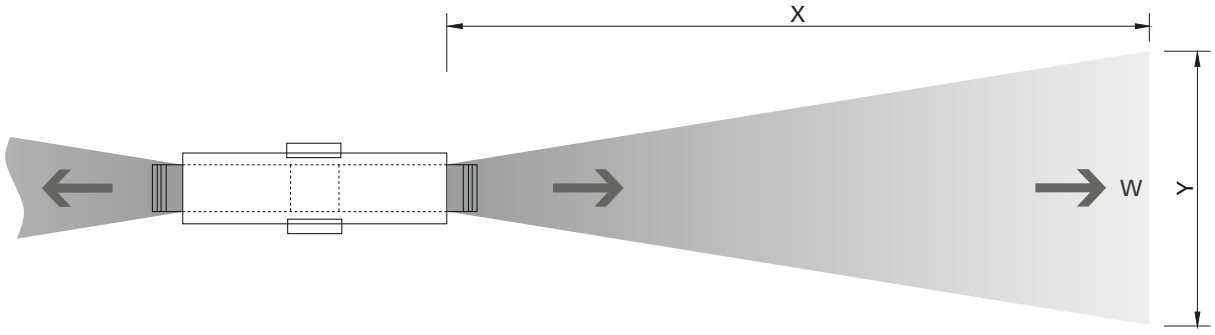
5.4.2 technical and flow parameters

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 Lw [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 Lw [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

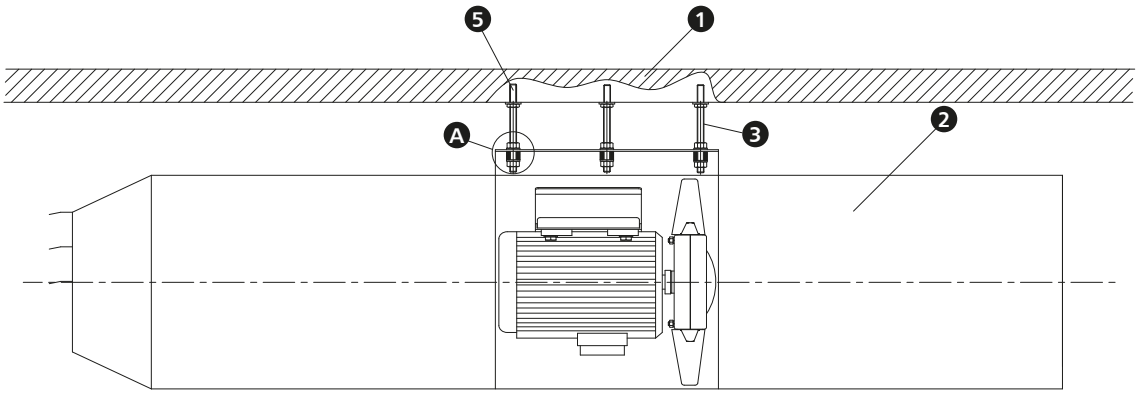
5.5. accessories

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.

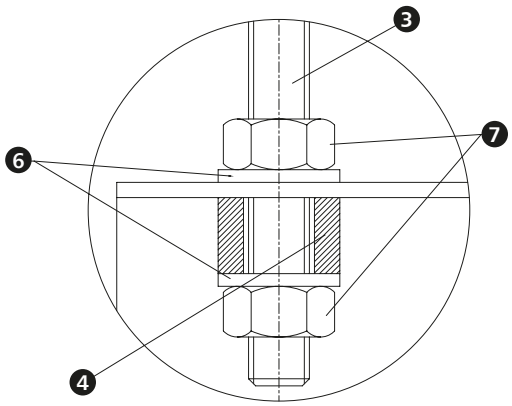
5.6. installation

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

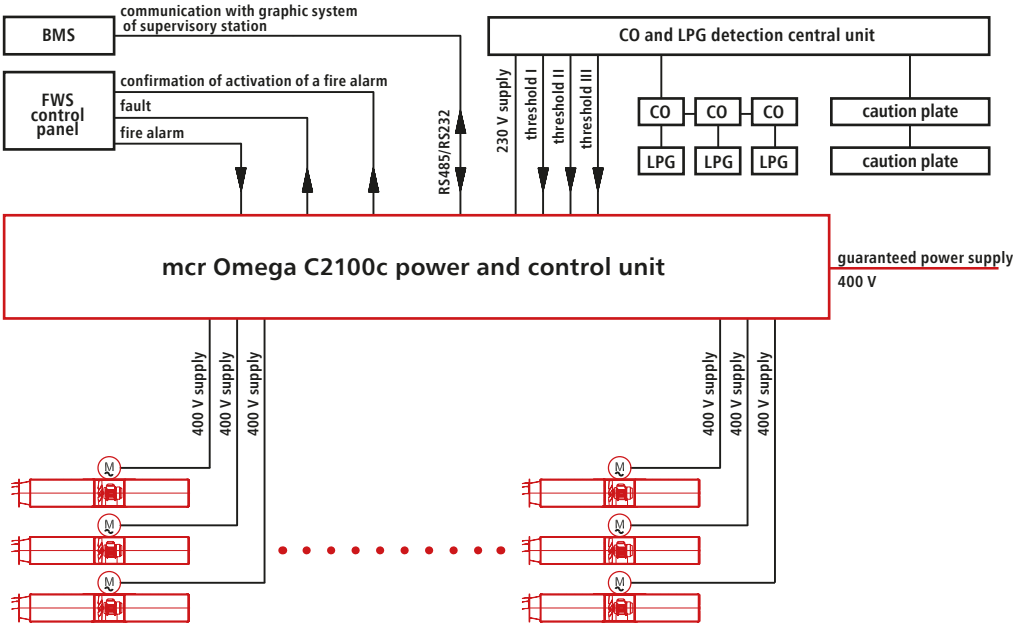
- F400 – fire resistance
- 2/4T – number of motor poles, T - three phase
- 29 – fan diameter [cm]
- REV – type of work
- L – housing version
- mcr Bora – fan type

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:



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