



**PRODUCT CONFIGURATOR  
AT [WWW.MERCOR.COM.PL](http://WWW.MERCOR.COM.PL)**

## **mcr Monsun**

smoke extraction and air supply  
axial-flow fans

# APPLICATION

**mcr Monsun fans** are designed to extract hot air, smoke and exhaust gases from fire-exposed areas. They are also suitable for comfort and industrial ventilation systems as exhaust or air supply fans. mcr Monsun fans can be used e.g. in public utility buildings, multi-dwelling buildings, industrial facilities, underground car parks or shopping malls.

They facilitate the evacuation of fire-exposed areas and efficient fire fighting operations, protect the building and its equipment against high temperatures, and also prevent fire from spreading into adjoining fire compartments.

mcr Monsun fans are designed for ducted or non-ducted mounting, in a vertical or horizontal position, and can be operated inside or outside buildings.

mcr Monsun tested in accordance with EN 12101-3:2002+AC:2005.  
Certificate of constancy of performance 1488-CPD-0345/W for F300 and F200 and 1488-CPD-0129/W for F400.  
Patent no 216872 issued by Patent Office of the Republic of Poland.

## FIRE RESISTANCE RATING

► F400 (400°C/2H)

► F300 (300°C/1H)

► F200 (200°C/2H)

Fans without a fire resistance rating (BO type) are available on an individual basis.

## DESIGN

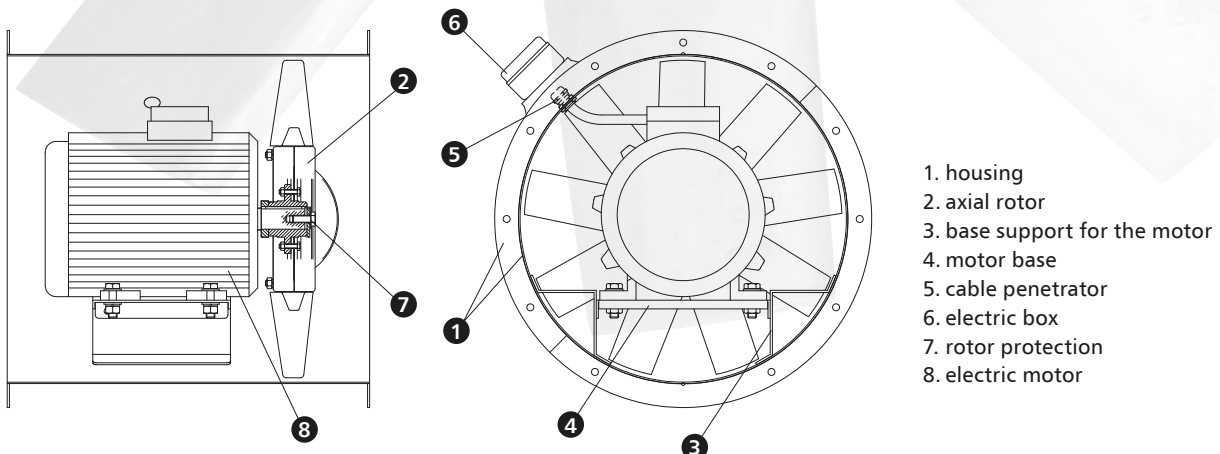
The **housing** is made of galvanized steel of a thickness of 2-6 mm, according to the diameter of the fan. The housing is powder coated or hot-dip galvanized for double anti-corrosive protection.

The **rotor** of the fan is mounted directly on the motor pin. It comes with 9 or 12 blades adjustable in 1° steps, and is produced by casting, with an aerodynamically profiled grid of blades which provides the required flow parameters.

The rotor can work at different blade angles and with a variable number of blades.

Depending on requirements, the fan can be used with a three-phase, one- or two-speed **motor** with rpm speeds of 3000, 1500, 1000 and 750, without serially-mounted thermal protection. The motor of the fan with a fire resistance rating has Class H insulation, whilst the motor of the fan without a fire resistance rating – Class F insulation. The mechanical protection degree is IP 55 in both cases.

The motor is adapted for operation with an inverter.

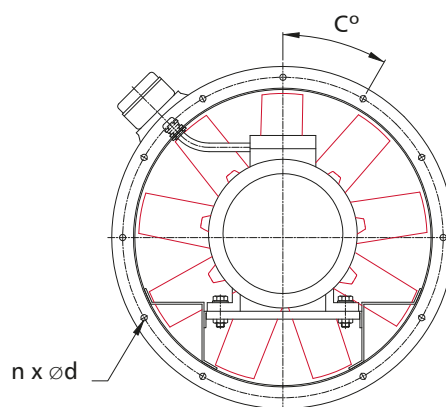
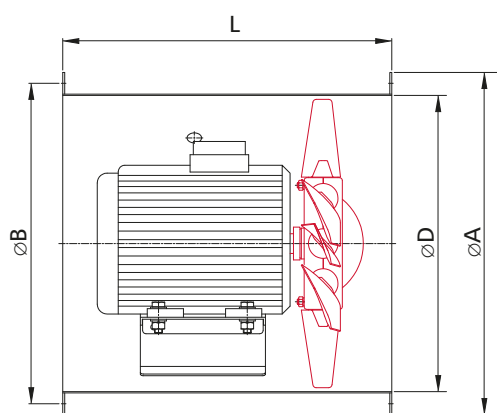


# DIMENSIONS

Smoke extraction and air supply axial-flow fans are available in the following **diameters**:  
355 mm, 400 mm, 450 mm, 500 mm, 560 mm, 630 mm, 710 mm, 800 mm, 900 mm, 1000 mm.

**Table 1** mcr Monsun fan dimensions.

type	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



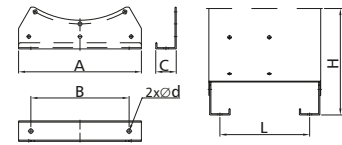
## ADDITIONAL COMPONENTS

- ▶ mounting feet for horizontal installation **SW**
- ▶ protective grids on the side of the rotor or the motor **SO**
- ▶ vibration compensators – F400 flexible connections **KD**
- ▶ counterflanges for ducted mounting **PK**
- ▶ automatic return dampers **KS, KS-V**
- ▶ vibration isolators **AM (F400), BM**
- ▶ silencers **TH/R**
- ▶ service breakers **WS**
- ▶ components for vertical mounting **PP**
- ▶ air control blades **KP**
- ▶ suction nozzles with grill **DS**
- ▶ outlet port with grill **WO**

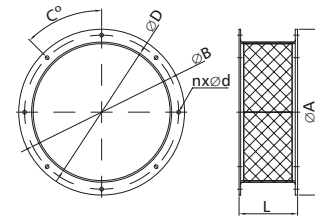


# ADDITIONAL COMPONENTS

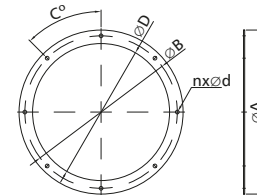
mounting feet SW								
fan	type	A [mm]	B [mm]	C [mm]	d [mm]	H [mm]	L [mm]	m [kg]
mcr Monsun 35	SW-35	305	245	50	12,5	260	344	1,1
mcr Monsun 40	SW-40	300	240	50	12,5	280	444	0,9
mcr Monsun 45	SW-45	320	260	50	12,5	320	444	1,1
mcr Monsun 50	SW-50	400	320	50	12,5	350	544	1,4
mcr Monsun 56	SW-56	450	370	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



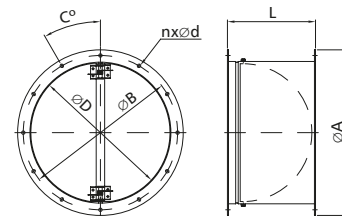
vibration compensators - flexible connections KD								
fan	type	D [mm]	~A [mm]	B [mm]	L [mm]	C [°]	nx d [mm]	m [kg]
mcr Monsun 35	KD-35	355	425	395	150	45	8 x 9,6	1,1
mcr Monsun 40	KD-40	400	470	438	150	30	12 x 9,6	1,3
mcr Monsun 45	KD-45	450	520	487	150	30	12 x 9,6	1,4
mcr Monsun 50	KD-50	500	570	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



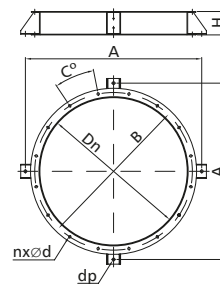
counterflanges PK							
fan	type	D [mm]	~A [mm]	B [mm]	C [°]	nx d [mm]	m [kg]
mcr Monsun 35	PK-35	359	425	395	45	8 x 9,6	0,9
mcr Monsun 40	PK-40	404	470	438	30	12 x 9,6	1,0
mcr Monsun 45	PK-45	454	520	487	30	12 x 9,6	1,2
mcr Monsun 50	PK-50	504	570	541	30	12 x 9,6	1,3
mcr Monsun 56	PK-56	564	640	605	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



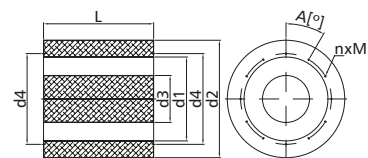
automatic return dampers KS, KS-V								
fan	type	D [mm]	~A [mm]	B [mm]	L [mm]	C [°]	nx d [mm]	m [kg]
mcr Monsun 35	KS[V]-35	355	425	395	240	45	8 x 9,6	6,6
mcr Monsun 40	KS[V]-40	400	470	438	250	30	12 x 9,6	7,6
mcr Monsun 45	KS[V]-45	450	520	487	290	30	12 x 9,6	9,5
mcr Monsun 50	KS[V]-50	500	570	541	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



components for vertical mounting PP									
fan	type	Dn [mm]	dp [mm]	A [mm]	H [mm]	B [mm]	C [°]	nx d [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



silencers TH/R									
fan	type	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	L [mm]	A [°]	nx M	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



# BASIC TECHNICAL PARAMETERS

## Parameters in tables and specifications:

$\Delta p_c$  – total compression [Pa]  
 $Q$  – output [m<sup>3</sup>/h]  
 $n$  – motor speed [rpm]  
 $P$  – rated power [kW]  
 $U_n$  – rated voltage [V]  
 $W$  – weight of the fan without additional components [kg]

The specifications have been established at a temperature of 20°C and air density of 1.2 kg/m<sup>3</sup>.

Technical descriptions and specifications for two-speed fans are available on request.

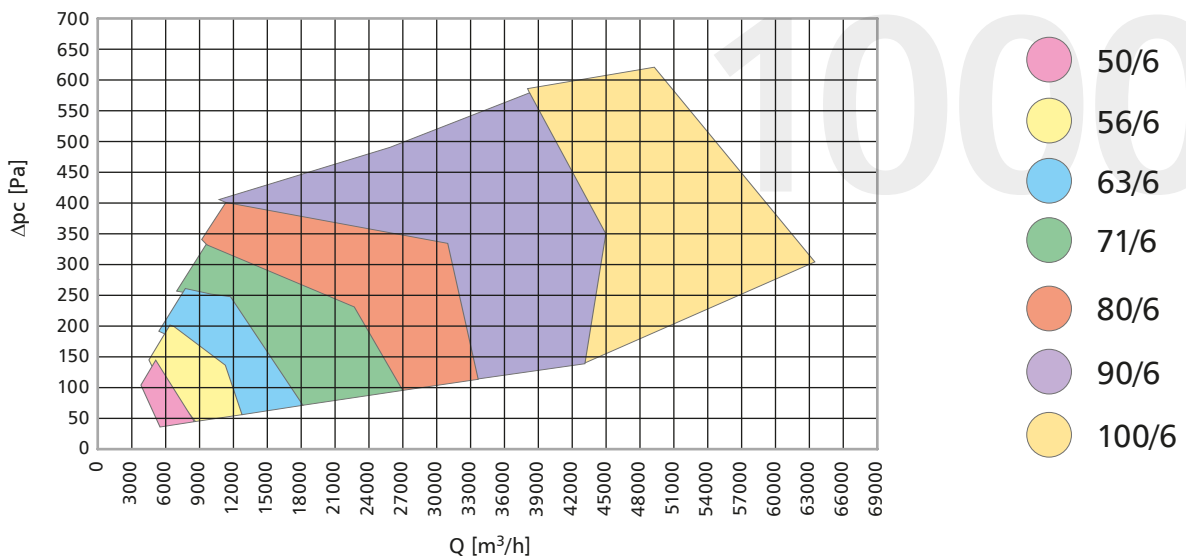
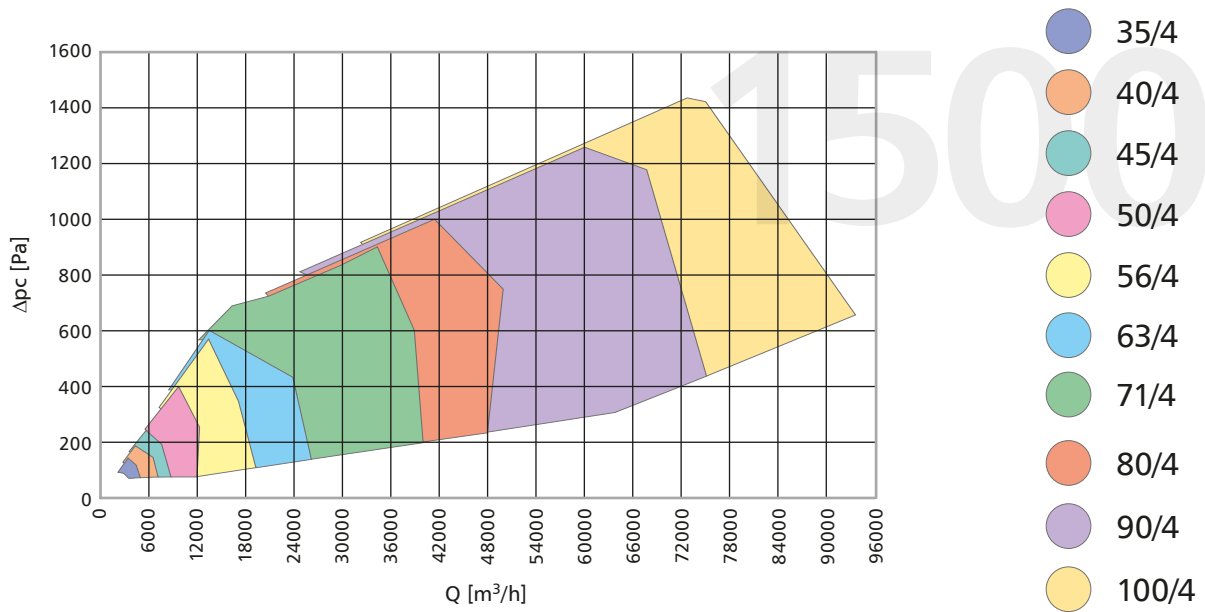
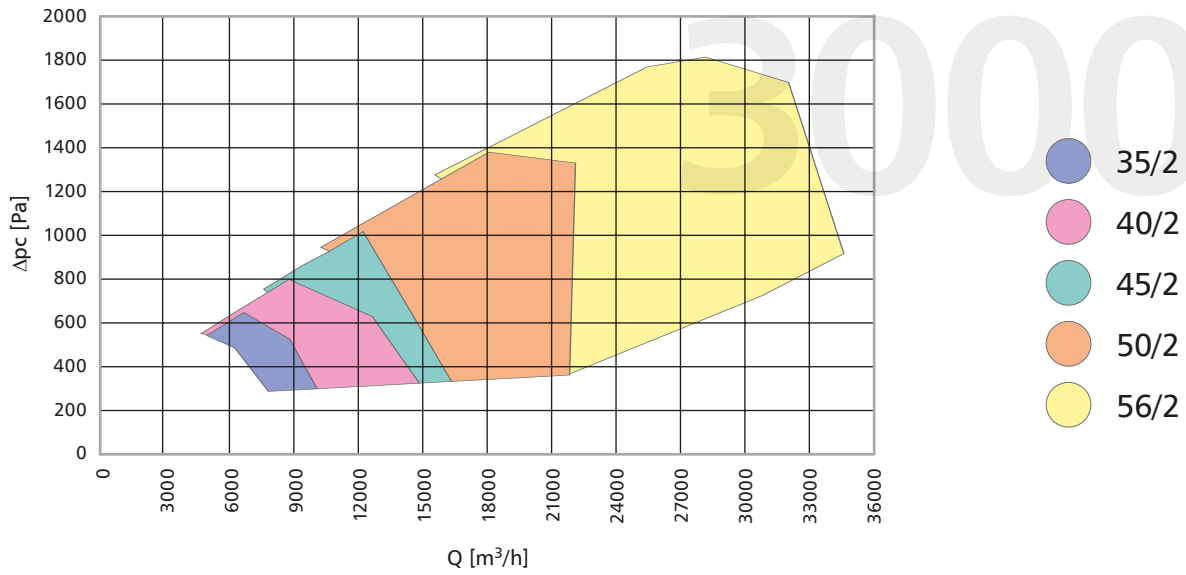
motors with n=750 rpm				
size	n	P	Un	W
63/8-0,55	750	0,55	400	60
63/8-0,75	750	0,75	400	68
63/8-0,37	750	0,37	400	56
63/8-0,25	750	0,25	400	52
71/8-1,1	750	1,1	400	110
71/8-0,75	750	0,75	400	104
71/8-0,55	750	0,55	400	96
80/8-2,2	750	2,2	400	143
80/8-1,5	750	1,5	400	127
80/8-1,1	750	1,1	400	118
90/8-4	750	4	400	207
90/8-3	750	3	400	170
90/8-2,2	750	2,2	400	162
90/8-1,5	750	1,5	400	147
100/8-5,5	750	5,5	400	253
100/8-4	750	4	400	247
100/8-3	750	3	400	210
100/8-2,2	750	2,2	400	202

motors with n=3000 rpm				
size	n	P	Un	W
35/2-1,5	3000	1,5	400	35
35/2-2,2	3000	2,2	400	38
35/2-1,1	3000	1,1	400	33
40/2-3	3000	3	400	55
40/2-4	3000	4	400	58
40/2-2,2	3000	2,2	400	44
40/2-1,5	3000	1,5	400	40
45/2-4	3000	4	400	60
45/2-3	3000	3	400	58
45/2-2,2	3000	2,2	400	46
50/2-11	3000	11	400	129
50/2-7,5	3000	7,5	400	100
50/2-5,5	3000	5,5	400	92
50/2-4	3000	4	400	70
56/2-15	3000	15	400	147
56/2-11	3000	11	400	136
56/2-7,5	3000	7,5	400	107
56/2-5,5	3000	5,5	400	99

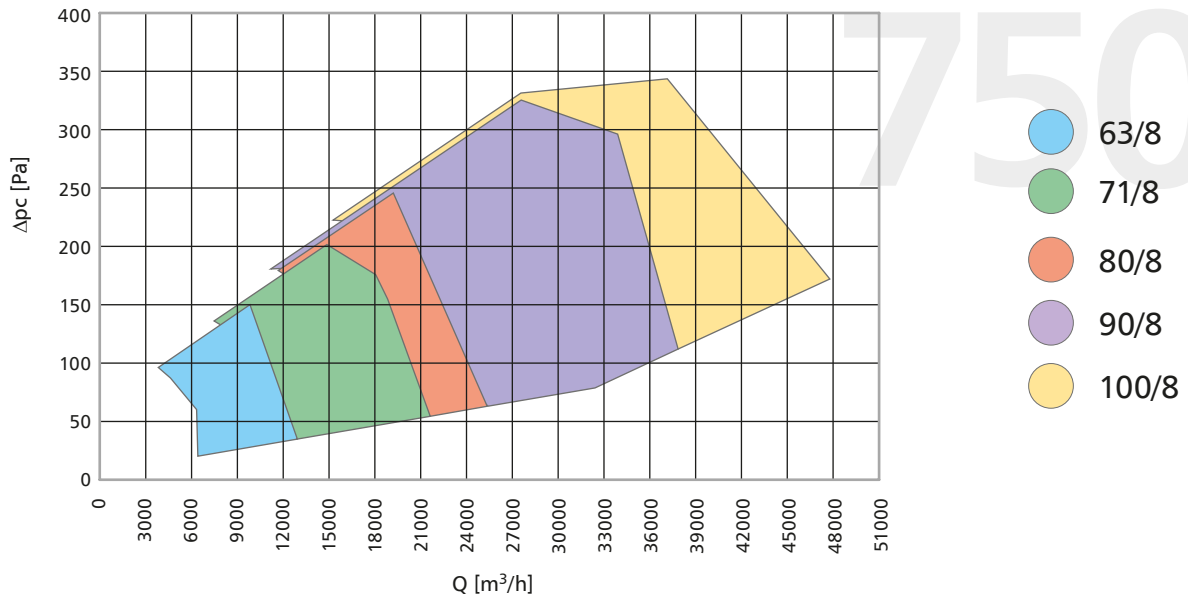
motors with n=1000 rpm				
size	n	P	Un	W
50/6-0,55	1000	0,55	400	45
50/6-0,37	1000	0,37	400	43
50/6-0,25	1000	0,25	400	42
56/6-1,1	1000	1,1	400	58
56/6-0,75	1000	0,75	400	54
56/6-0,55	1000	0,55	400	49
63/6-1,5	1000	1,5	400	76
63/6-1,1	1000	1,1	400	62
63/6-0,75	1000	0,75	400	58
71/6-3	1000	3	400	132
71/6-2,2	1000	2,2	400	119
71/6-1,5	1000	1,5	400	110
71/6-1,1	1000	1,1	400	97
80/6-5,5	1000	5,5	400	160
80/6-4	1000	4	400	150
80/6-3	1000	3	400	142
80/6-2,2	1000	2,2	400	127
80/6-1,5	1000	1,5	400	118
90/6-11	1000	11	400	230
90/6-7,5	1000	7,5	400	202
90/6-5,5	1000	5,5	400	179
90/6-4	1000	4	400	169
90/6-3	1000	3	400	161
100/6-11	1000	11	400	270
100/6-7,5	1000	7,5	400	242
100/6-5,5	1000	5,5	400	219

motors with n=1500 rpm				
size	n	P	Un	W
35/4-0,55	1500	0,55	400	28
40/4-0,75	1500	0,75	400	36
45/4-1,1	1500	1,1	400	42
45/4-0,75	1500	0,75	400	39
45/4-0,55	1500	0,55	400	36
50/4-1,5	1500	1,5	400	52
50/4-1,1	1500	1,1	400	50
50/4-0,75	1500	0,75	400	46
50/4-0,55	1500	0,55	400	46
56/4-3	1500	3	400	69
56/4-2,2	1500	2,2	400	67
56/4-1,5	1500	1,5	400	54
63/4-4	1500	4	400	81
63/4-3	1500	3	400	74
63/4-2,2	1500	2,2	400	72
71/4-11	1500	11	400	181
71/4-7,5	1500	7,5	400	145
71/4-5,5	1500	5,5	400	137
80/4-15	1500	15	400	207
80/4-11	1500	11	400	190
80/4-7,5	1500	7,5	400	152
90/4-30	1500	30	400	366
90/4-22	1500	22	400	286
90/4-18,5	1500	18,5	400	237
90/4-15	1500	15	400	222
90/4-11	1500	11	400	205
100/4-45	1500	45	400	524
100/4-37	1500	37	400	426
100/4-30	1500	30	400	396
100/4-22	1500	22	400	315
100/4-18,5	1500	18,5	400	266

# BASIC TECHNICAL PARAMETERS



# BASIC TECHNICAL PARAMETERS



Mercor's fan configurator is now available at [www.mercor.com.pl](http://www.mercor.com.pl). Our configurator will provide you with a fan selection record sheet and detailed specifications for the set input parameters.

## TYPE MARKING

mcr MonSun 50 / 4 - 1,5 - 15 - F400 / SW

- additional components
- fire resistance
- blade angle [°]
- electric motor power [kW]
- number of motor poles
- rated fan diameter [x10] [mm]
- fan type



## FIRE PROTECTION SYSTEMS

- ▶ fire ventilation systems
- ▶ fire protection of building structures
- ▶ smoke and heat exhaust systems



**Mercor SA**  
ul. Grzegorza z Sanoka 2  
80-408 Gdańsk, Poland  
tel. +48 58 341 42 45  
fax +48 58 341 39 85  
[mercor@mercor.com.pl](mailto:mercor@mercor.com.pl)

[www.mercor.com.pl](http://www.mercor.com.pl)