

## DIRECT DRIVE MOTOR

# MA

**Extremely robust, medium pressure and single inlet centrifugal fans with sheet steel casing and impeller**  
*Designed for dusty air*



\*The images are provided only for illustrative purposes, the product may vary depending on its size, specifications and position.

### Fan:

- Sheet steel casing.
- Impeller with reaction blades in extremely robust sheet steel, specially designed for air that is dusty or with small size granular material.
- Motor coupled directly.
- Sizes larger than 1600 will be supplied with the casing disassembled to facilitate transport.
- Casing continuously welded starting with size 710.

### Motor:

- IE3 efficiency motors for powers equal to or higher than 0.75 kW except single-phase, 2-speed and 8-poles.
- Class F motors with ball bearings and IP55 protection.
- Three-phase 230/400 V-50 Hz (up to 4 kW) and 400/690 V-50 Hz (powers higher than 4 kW).
- Maximum temperature of air to be carried: -25°C +90°C.

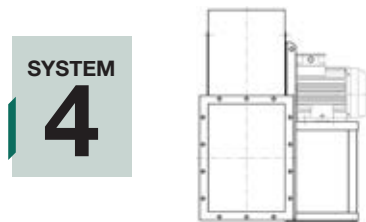
### Finish:

- Anti-corrosive finish of polyester resin polymerised at 190°C, previously degreased with phosphate-free nanotechnological treatment.

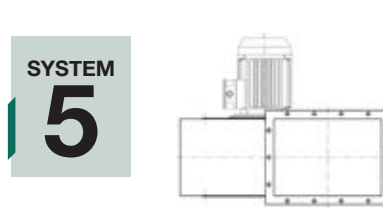
### On request:

- Special windings for different voltages.
- Fan prepared for air transmission of up to +150°C.
- Special executions for temperatures of +300°C.
- Stainless steel fan.
- Category 2 ATEX certification.
- System 8 elastic coupling.

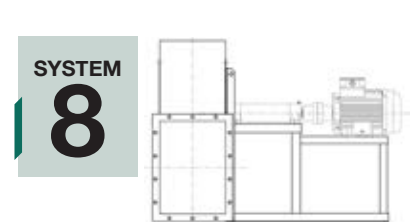
### Direct drive motor construction method



Direct drive, impeller mounted on the motor shaft, mounted on the pedestal.



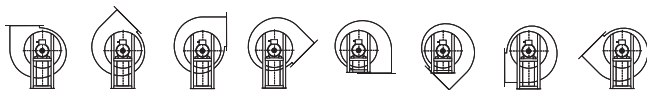
Direct drive, impeller mounted on the motor shaft, flange motor mounted on the fan casing.



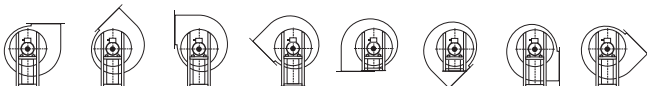
Elastic coupling drive, impeller mounted on the support shaft, mounted on the motor via an elastic coupling. Everything mounted together on a fan pedestal.

### Orientations

RD 0 RD45 RD90 RD135 RD180 RD225 RD270 RD315



LG 0 LG45 LG90 LG135 LG180 LG225 LG270 LG315



Built to withstand high temperatures





**BELT-DRIVEN MOTOR**

# MA/R

**Belt-driven, medium pressure fans fitted with electric motors and a standardised set of pulleys, belts and protectors in accordance with standard ISO 13857**  
*Designed for dusty air*



\*The images are provided only for illustrative purposes, the product may vary depending on its size, specifications and position.

- Fan:**
- Sheet steel casing.
  - Impeller with reaction blades in extremely robust sheet steel, specially designed for air that is dusty or with small size granular material.
  - Motor assembled on the general bench.
  - Sizes larger than 1600 will be supplied with the casing disassembled to facilitate transport.
  - Casing continuously welded starting with size 710.

- Motor:**
- IE3 efficiency motors.
  - Class F motors with ball bearings and IP55 protection.
  - Three-phase 230/400 V-50 Hz (up to 4 kW) and 400/690 V-50 Hz (powers higher than 4 kW).
  - Maximum temperature of air to be carried: -25°C +90°C.

- Finish:**
- Anti-corrosive finish of polyester resin polymerised at 190°C, previously degreased with phosphate-free nanotechnological treatment.

- On request:**
- Special windings for different voltages.
  - Fan prepared for air transmission of up to +300°C.
  - Stainless steel fan.
  - Category 2 ATEX certification.
  - System 8 elastic coupling.

**Belt-driven motor construction method**

**SYSTEM 12**



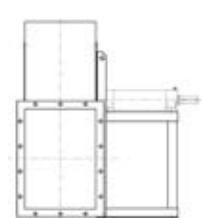
Transmission drive, identical to SYSTEM 1, with the motor and fan mounted on the common bench. Motor positions "W" or "Z" and exceptionally "X" or "Y".

**SYSTEM 9**



Transmission drive, identical to SYSTEM 1, with the motor mounted on the side of the pedestal, in position "W" or "Z".

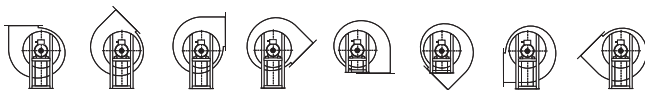
**SYSTEM 1**



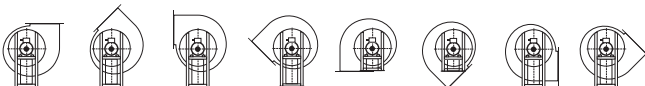
Transmission drive, impeller mounted on the support shaft. Support mounted on the pedestal.

**Orientations**

RD 0 RD45 RD90 RD135 RD180 RD225 RD270 RD315



LG 0 LG45 LG90 LG135 LG180 LG225 LG270 LG315



## QUICK SELECT SYSTEM 4

### Impulsion characteristics

Model	Frame	kW abs.	kW inst.	RPM	dB	V m <sup>3</sup> /s																				
						0.13	0.15	0.17	0.19	0.21	0.23	0.26	0.3	0.33	0.37	0.42	0.47	0.53	0.6	0.67	0.75					
						Pt kgf/m <sup>2</sup> =mmH <sub>2</sub> O																				
MA 250/B	63 B/2	0.22	0.25	2700	66	90	88	87	85	80	75	68	62	52	40											
MA 250/A	71 A/2	0.3	0.37	2800	67	102	101	100	98	94	87	82	75	65	55											
MA 280/B	71 B/2	0.45	0.55	2810	69			105	103	100	98	96	94	88	76	65	53									
MA 280/A	80 A/2	0.6	0.75	2820	69			125	120	118	116	112	105	100	90	80	70									
MA 310/B	80 B/2	0.8	1.1	2820	72											145	143	140	138	130	120	110	100	85		
MA 310/A	90 S/2	1	1.5	2840	75											165	164	163	160	155	143	133	122	105		
MA 350/B	90 S/2	1.43	1.5	2840	76															182	180	175	165	155	140	
MA 350/A	90 L/2	1.87	2.2	2840	77															208	206	204	200	190	175	
MA 400/B	100 L/2	2.8	3	2850	80																	240	235	230		
MA 400/A	112 MA/2	3.5	4	2860	81																	260	255	250		
MA 500/B	90 S/4	1	1.1	1380	73																	90	88	87	85	
MA 500/A	90 L/4	1.3	1.5	1380	74																	103	102	100	97	
MA 560/B	100 LA/4	1.8	2.2	1410	68																					115
MA 560/A	100 LB/4	2.4	3	1410	70																					130

Flow margin ±5%  
Noise level margin +3...5 dB

Model	Frame	kW abs.	kW inst.	RPM	dB	V m <sup>3</sup> /s																			
						0.85	0.95	1.05	1.15	1.3	1.5	1.7	1.9	2.1	2.3	2.6	3	3.3	3.7	4.2	4.7				
						Pt kgf/m <sup>2</sup> =mmH <sub>2</sub> O																			
MA 310/B	80 B/2	0.8	1.1	2820	72	68																			
MA 310/A	90 S/2	1	1.5	2840	75	90																			
MA 350/B	90 S/2	1.43	1.5	2840	76	130	105	88																	
MA 350/A	90 L/2	1.87	2.2	2840	77	155	135	118																	
MA 400/B	100 L/2	2.8	3	2850	80	215	200	180	160	140	110														
MA 400/A	112 MA/2	3.5	4	2860	81	240	230	210	195	170	140														
MA 450/B	132 SA/2	5	5.5	2880	83	300	295	290	275	255	230	210	175	140	100										
MA 450/A	132 SB/2	5.8	7.5	2900	86	345	340	337	325	300	280	255	220	185	125										
MA 500/B	160 MA/2	9	11	2910	89				385	380	375	350	325	300	270	230	180	120							
MA 500/A	160 MB/2	12	15	2930	90				440	435	430	415	380	360	325	280	235	180							
MA 560/B	160 L/2	16	18.5	2940	92							485	480	470	440	410	375	340	285	225	150				
MA 560/A	180 M/2	20	22	2950	93							555	550	540	520	480	450	410	355	295	220				
MA 500/B	90 S/4	1	1.1	1380	73	80	75	70	62	52	40														
MA 500/A	90 L/4	1.3	1.5	1380	74	95	88	82	75	65	55														
MA 560/B	100 LA/4	1.8	2.2	1410	68	113	112	108	102	95	90	80	70	55											
MA 560/A	100 LB/4	2.4	3	1410	70	129	128	125	120	110	105	95	85	70											
MA 630/B	112 M/4	3.4	4	1410	73			140	138	136	132	130	120	110	100	95	68	50							
MA 630/A	132 S/4	4.2	5.5	1420	76			163	162	161	155	150	140	130	123	105	85	70							
MA 710/B	132 MA/4	6.5	7.5	1430	78							190	188	185	180	175	160	158	140	105	95	75			
MA 710/A	160 M/4	8	11	1465	79							215	214	210	205	200	190	182	160	135	120	90			
MA 800/B	160 L/4	12	15	1465	80											250	245	240	235	230	220	210	190		
MA 800/A	180 M/4	16	18.5	1470	83											280	278	275	268	258	248	215	205		
MA 900/B	200 L/4	25	30	1470	85															335	330	325	320	315	
MA 900/A	225 S/4	35	37	1480	87															380	375	370	365	360	
MA 1000/B	225 M/4	43	45	1480	88																			410	405
MA 1000/A	250 M/4	50	55	1480	90																			470	465
MA 800/B	132 MA/6	3.4	4	950	71							105	100	98	97	95	93	85	80	70	60	42			
MA 800/A	132 MB/6	4.2	5.5	950	72							118	115	114	112	110	108	100	90	80	70	57			
MA 900/B	160 M/6	7	7.5	960	73											140	137	137	135	133	130	130	120	110	
MA 900/A	160 L/6	9	11	960	75											160	157	155	152	150	145	140	135	130	
MA 1000/B	180 L/6	12	15	970	76															180	175	174	172	170	165
MA 1000/A	200 LA/6	16	18.5	975	78															200	198	195	190	188	185
MA 1120/B	200 LB/6	20	22	975	81																	220	215	210	
MA 1120/A	225 M/6	28	30	980	84																	252	250	245	

Flow margin ±5%  
Noise level margin +3...5 dB



**QUICK SELECT SYSTEM 4**

**Impulsion characteristics**

Model	Frame	kW abs.	kW inst.	RPM	dB	V m <sup>3</sup> /s																		
						5.3	6	6.7	7.5	8.5	9.5	10.5	12	13	15	17	19	21	23					
						Pt kgf/m <sup>2</sup> =mmH <sub>2</sub> O																		
MA 800/B	160 L/4	12	15	1465	80	170	130	95																
MA 800/A	180 M/4	16	18.5	1470	83	180	155	130																
MA 900/B	200 L/4	25	30	1470	85	310	295	275	255	225	180													
MA 900/A	225 S/4	35	37	1480	87	350	335	315	295	260	230													
MA 1000/B	225 M/4	43	45	1480	88	400	395	390	380	360	340	315	280	230										
MA 1000/A	250 M/4	50	55	1480	90	460	455	445	435	415	390	365	335	290										
MA 1120/B	280 S/4	74	75	1485	93		515	510	505	500	495	480	455	430	395	335	290							
MA 1120/A	280 M/4	88	90	1485	95		590	585	580	570	560	545	520	490	455	410	350							
MA 900/B	160 M/6	7	7.5	960	73	97	87																	
MA 900/A	160 L/6	9	11	960	75	120	110																	
MA 1000/B	180 L/6	12	15	970	76	160	150	140	125	100														
MA 1000/A	200 LA/6	16	18.5	975	78	180	172	160	150	135														
MA 1120/B	200 LB/6	20	22	975	81	208	205	202	200	185	165	150	130											
MA 1120/A	225 M/6	28	30	980	84	242	240	238	230	220	205	185	165											
MA 1250/B	250 M/6	35	37	980	86	285	280	275	270	270	260	245	240	235	215	190	160							
MA 1250/A	280 S/6	43	45	985	88	325	320	315	312	307	300	298	280	270	250	220	190							
MA 1400/B	280 M/6	53	55	985	90				350	345	340	338	335	325	310	290	270	260	250					
MA 1400/A	315 S/6	73	75	990	90				410	405	403	400	395	390	375	365	340	315	300					

Flow margin ±5%  
Noise level margin +3...5 dB





**QUICK SELECT SYSTEM 4**

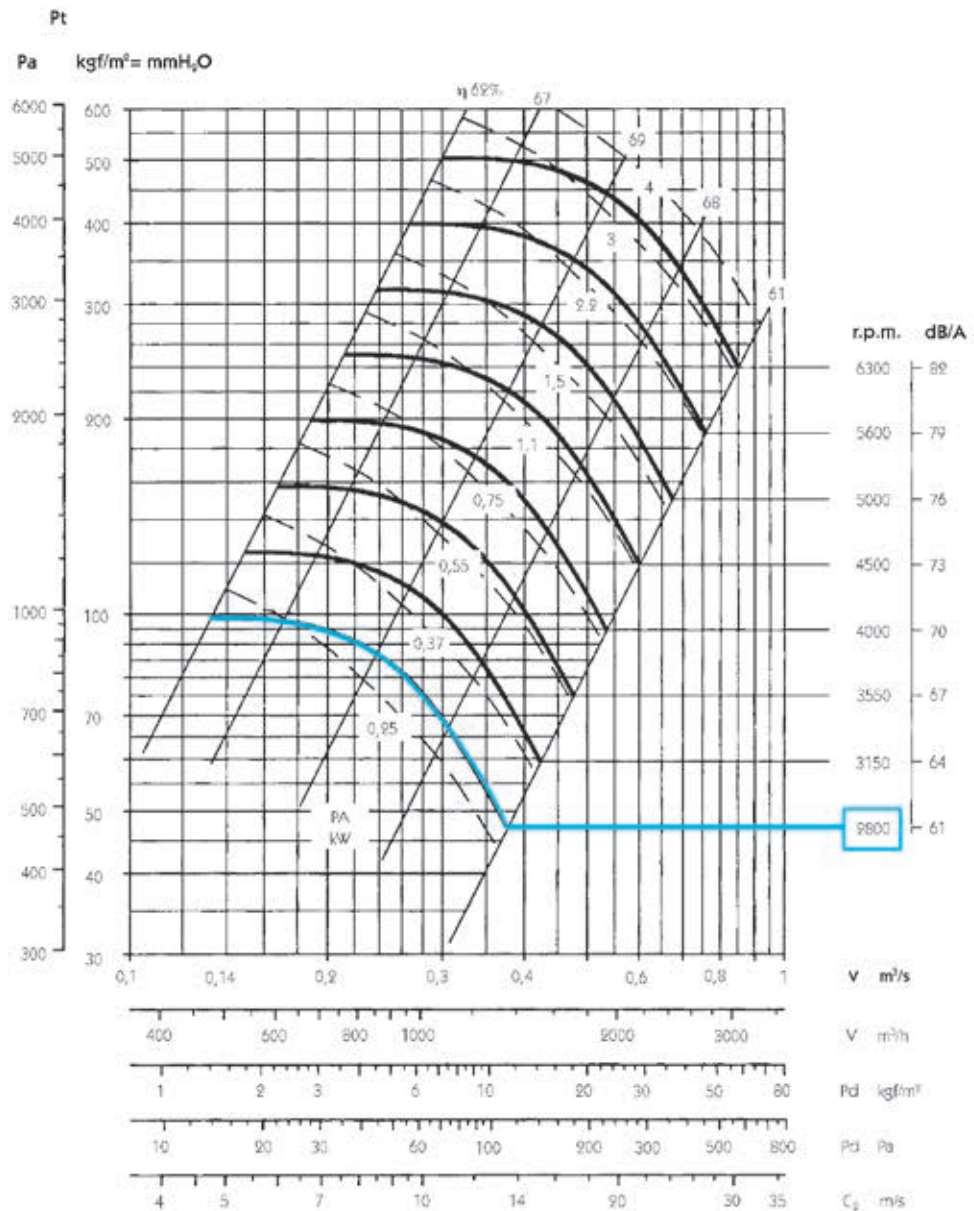
*Inlet characteristics*

Model	Frame	kW abs.	kW inst.	RPM	dB	V m³/s													
						5.3	6	6.7	7.5	8.5	9.5	10.5	12	13	15	17	19	21	23
						Pt kgf/m²=mmH₂O													
MA 800/B	160 L/4	12	15	1465	83	160	122	89											
MA 800/A	180 M/4	16	18.5	1470	86	169	146	122											
MA 900/B	200 L/4	25	30	1470	88	291	277	259	240	212	169								
MA 900/A	225 S/4	35	37	1480	90	329	315	296	277	244	216								
MA 1000/B	225 M/4	43	45	1480	91	376	371	367	357	338	320	296	263	216					
MA 1000/A	250 M/4	50	55	1480	93	432	428	418	409	390	367	343	315	273					
MA 1120/B	280 S/4	74	75	1485	96			484	479	475	470	465	451	428	404	371	315	273	
MA 1120/A	280 M/4	88	90	1485	98			555	550	545	536	526	512	489	461	428	385	329	
MA 900/B	160 M/6	7	7.5	960	76	91	82												
MA 900/A	160 L/6	9	11	960	78	113	103												
MA 1000/B	180 L/6	12	15	970	79	150	141	132	118	94									
MA 1000/A	200 LA/6	16	18.5	975	81	169	162	150	141	127									
MA 1120/B	200 LB/6	20	22	975	84	196	193	190	188	174	155	141	122						
MA 1120/A	225 M/6	28	30	980	87	227	226	224	216	207	193	174	155						
MA 1250/B	250 M/6	35	37	980	89	268	263	259	254	254	244	230	226	221	202	179	150		
MA 1250/A	280 S/6	43	45	985	91	306	301	296	293	289	282	280	263	254	235	207	179		
MA 1400/B	280 M/6	53	55	985	93				329	324	320	318	315	306	291	273	254	244	235
MA 1400/A	315 S/6	73	75	990	93				385	381	379	376	371	367	353	343	320	296	282

Flow margin ±5%  
Noise level margin +3...5 dB

### Characteristic curves

## MA 250



Flow margin  $\pm 5\%$   
Noise level margin  $+3$  dB  
Margin of kW absorbed  $\pm 3\%$

Impulsion characteristics

Maximum admissible RPM

Class 1	
$\leq 100^\circ\text{C}$	5600
100 ... 200°C	5000
200 ... 300°C	4500

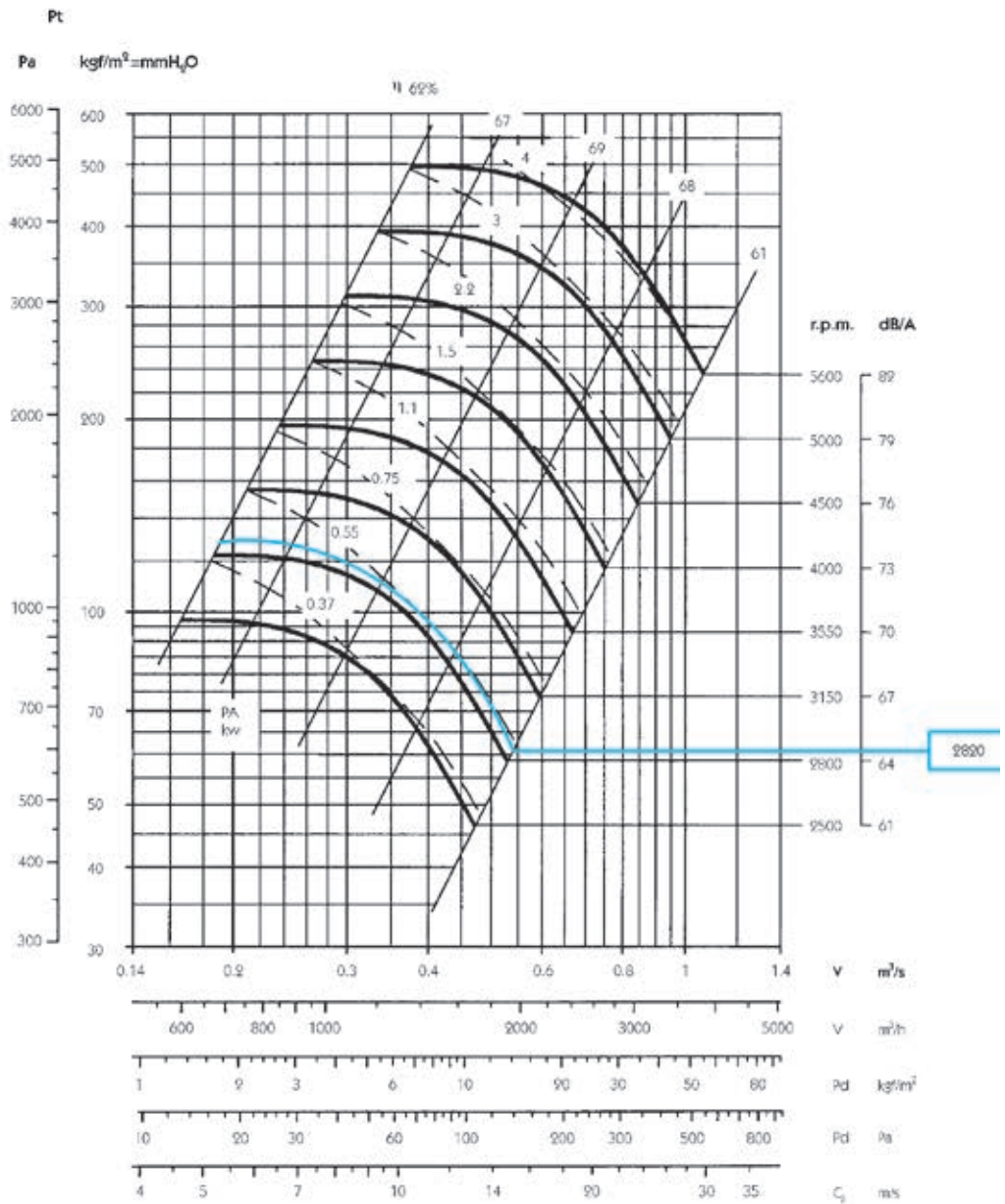
**RPM**

Characteristics for:  
system 4 and 5 in direct  
drive motor with 2/4/6/8  
poles depending on the  
model.



Characteristic curves

MA 280



Flow margin ±5%  
 Noise level margin +3 dB  
 Margin of kW absorbed ±3%

Impulsion characteristics

Maximum admissible RPM

Class 1	
≤ 100°C	5000
100 ... 200°C	4500
200 ... 300°C	4000

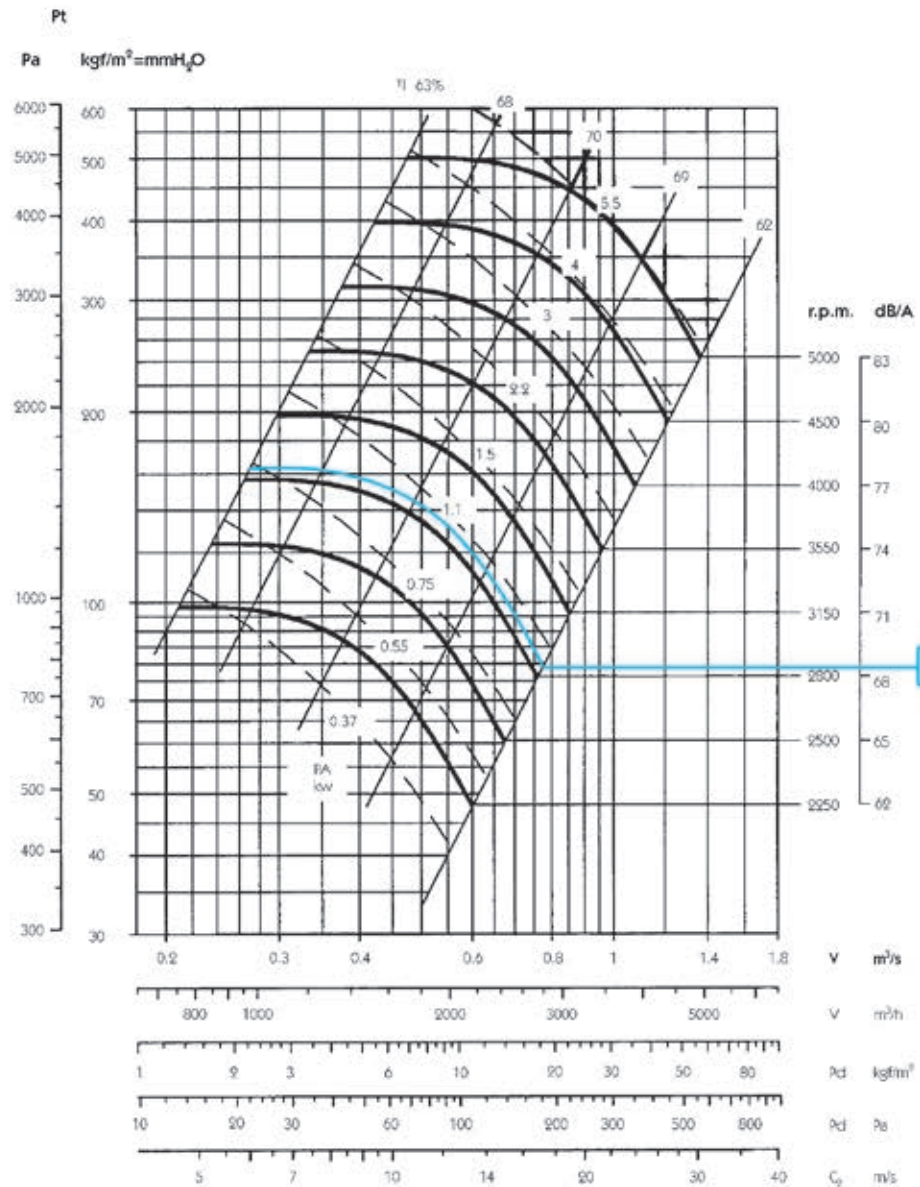
RPM

Characteristics for:  
 system 4 and 5 in direct  
 drive motor with 2/4/6/8  
 poles depending on the  
 model.



## Characteristic curves

### MA 310



Flow margin  $\pm 5\%$   
Noise level margin +3 dB  
Margin of kW absorbed  $\pm 3\%$

Impulsion characteristics

Maximum admissible RPM

Class 1	
$\leq 100^{\circ}\text{C}$	4500
100 ... 200 $^{\circ}\text{C}$	4000
200 ... 300 $^{\circ}\text{C}$	3550

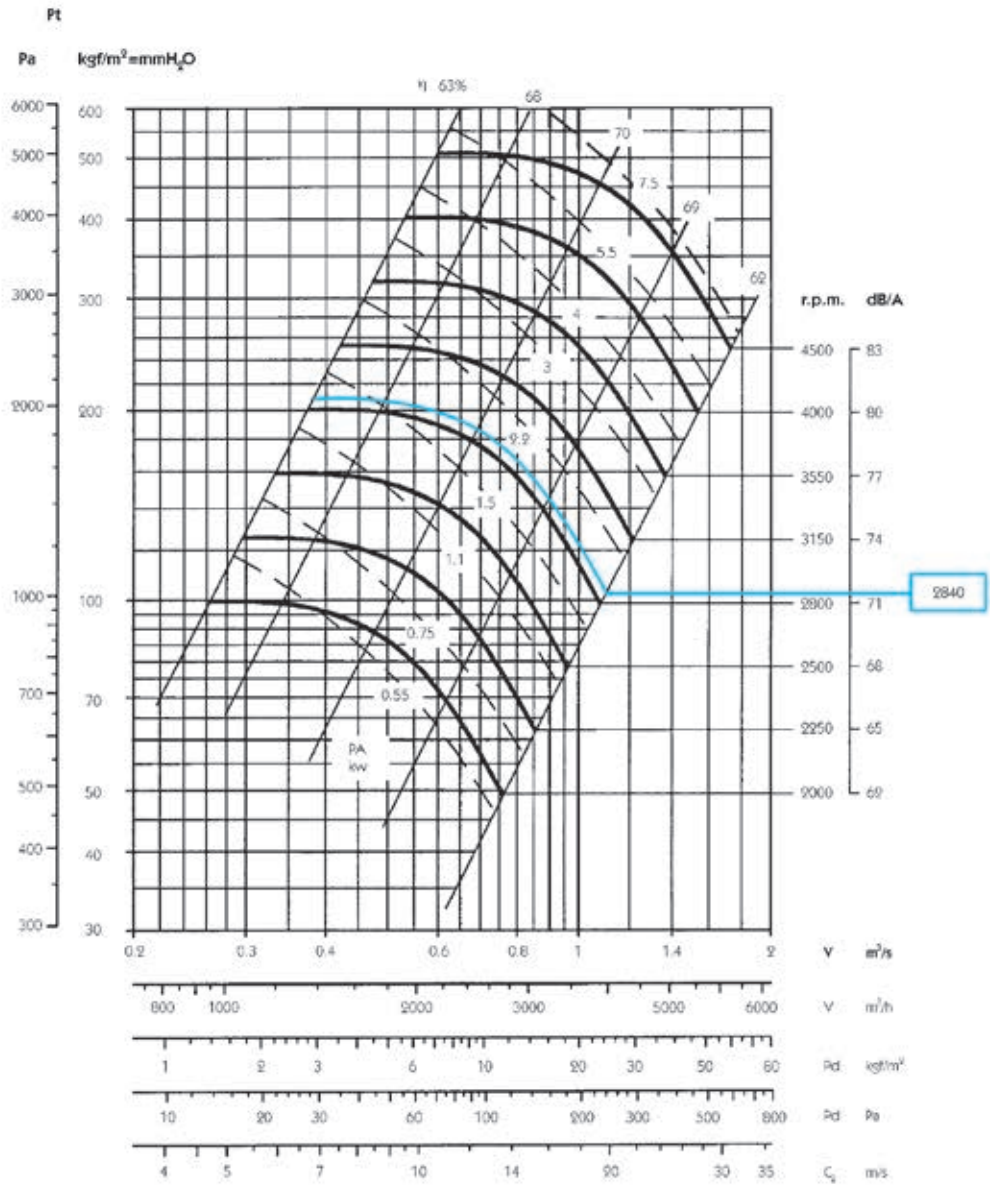
RPM

Characteristics for:  
system 4 and 5 in direct  
drive motor with 2/4/6/8  
poles depending on the  
model.



Characteristic curves

MA 350



Flow margin ±5%  
 Noise level margin +3 dB  
 Margin of kW absorbed ±3%  
 Impulsion characteristics

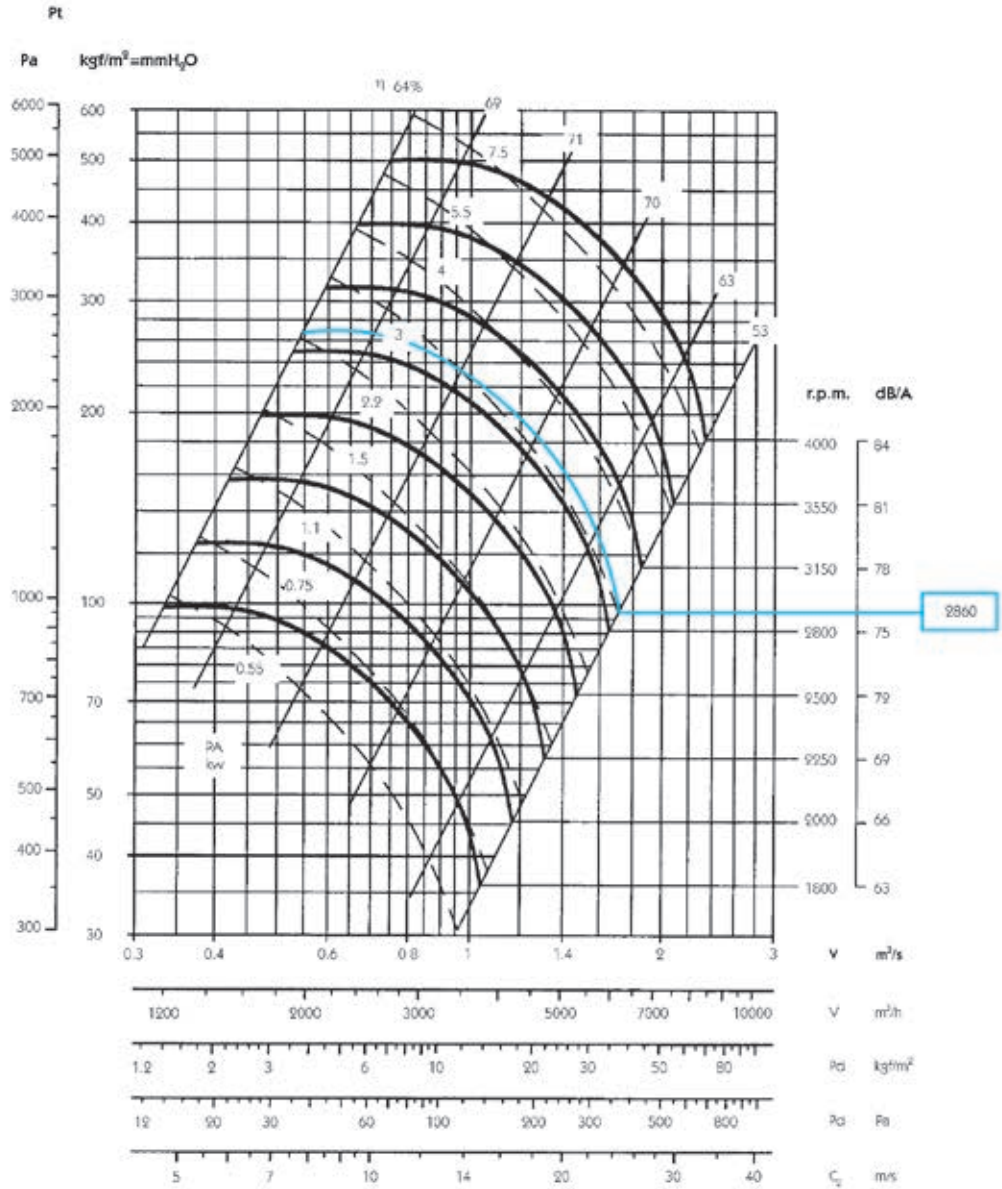
Maximum admissible RPM

Class 1	
≤ 100°C	4000
100 ... 200°C	3550
200 ... 300°C	3150

**RPM** Characteristics for:  
 system 4 and 5 in direct  
 drive motor with 2/4/6/8  
 poles depending on the  
 model.

### Characteristic curves

## MA 400



Flow margin  $\pm 5\%$   
Noise level margin +3 dB  
Margin of kW absorbed  $\pm 3\%$

Impulsion characteristics

Maximum admissible RPM

Class 1	
$\leq 100^\circ\text{C}$	3550
100 ... 200°C	3150
200 ... 300°C	2800

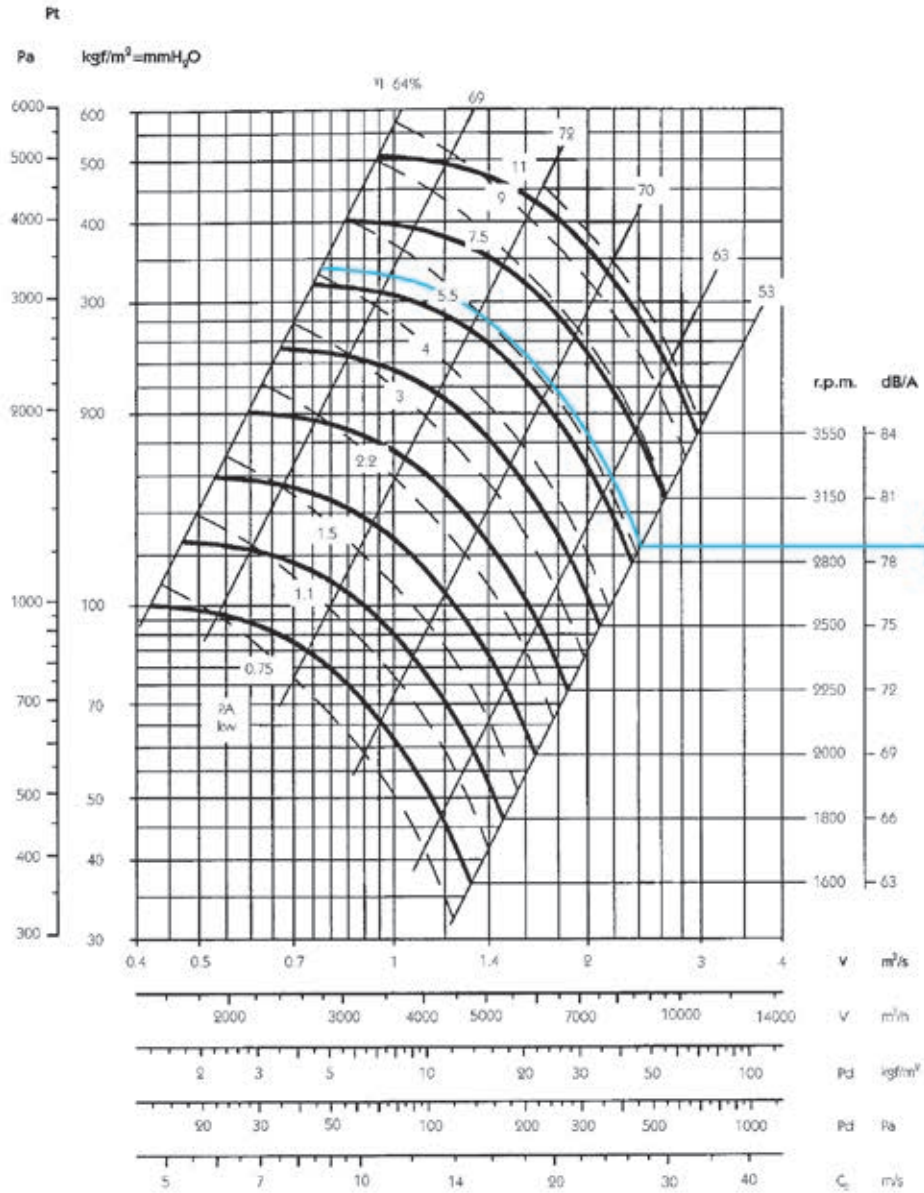
**RPM**

Characteristics for:  
system 4 and 5 in direct  
drive motor with 2/4/6/8  
poles depending on the  
model.



Characteristic curves

MA 450



Flow margin ±5%  
 Noise level margin +3 dB  
 Margin of kW absorbed ±3%  
 Impulsion characteristics

Maximum admissible RPM

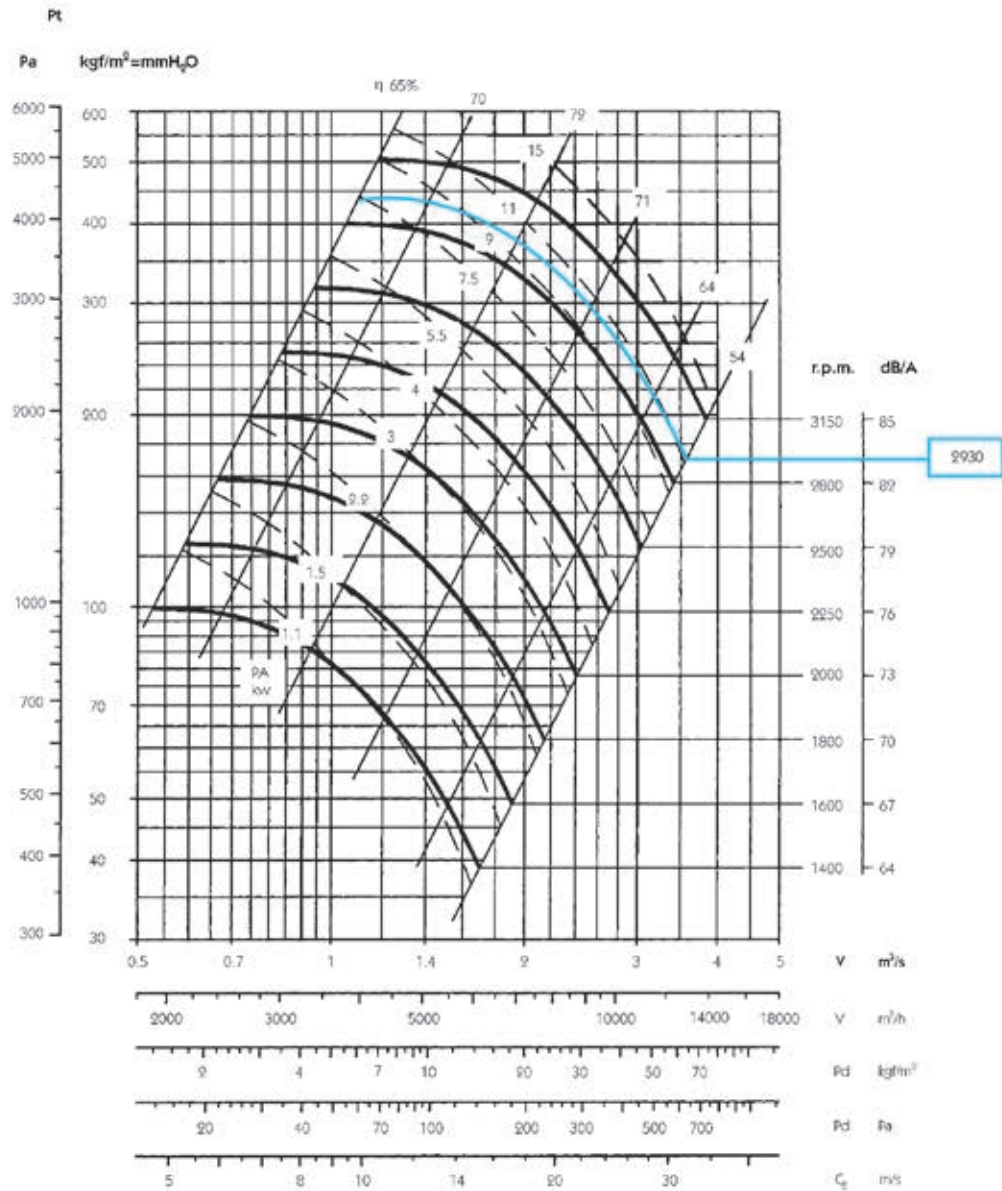
Class 1	
≤ 100°C	3150
100 ... 200°C	2800
200 ... 300°C	2500

RPM

Characteristics for:  
 system 4 and 5 in direct  
 drive motor with 2/4/6/8  
 poles depending on the  
 model.

## Characteristic curves

### MA 500



Flow margin  $\pm 5\%$   
Noise level margin +3 dB  
Margin of kW absorbed  $\pm 3\%$

Impulsion characteristics

Maximum admissible RPM

Class 1	
$\leq 100^\circ\text{C}$	2800
100 ... 200°C	2500
200 ... 300°C	2250

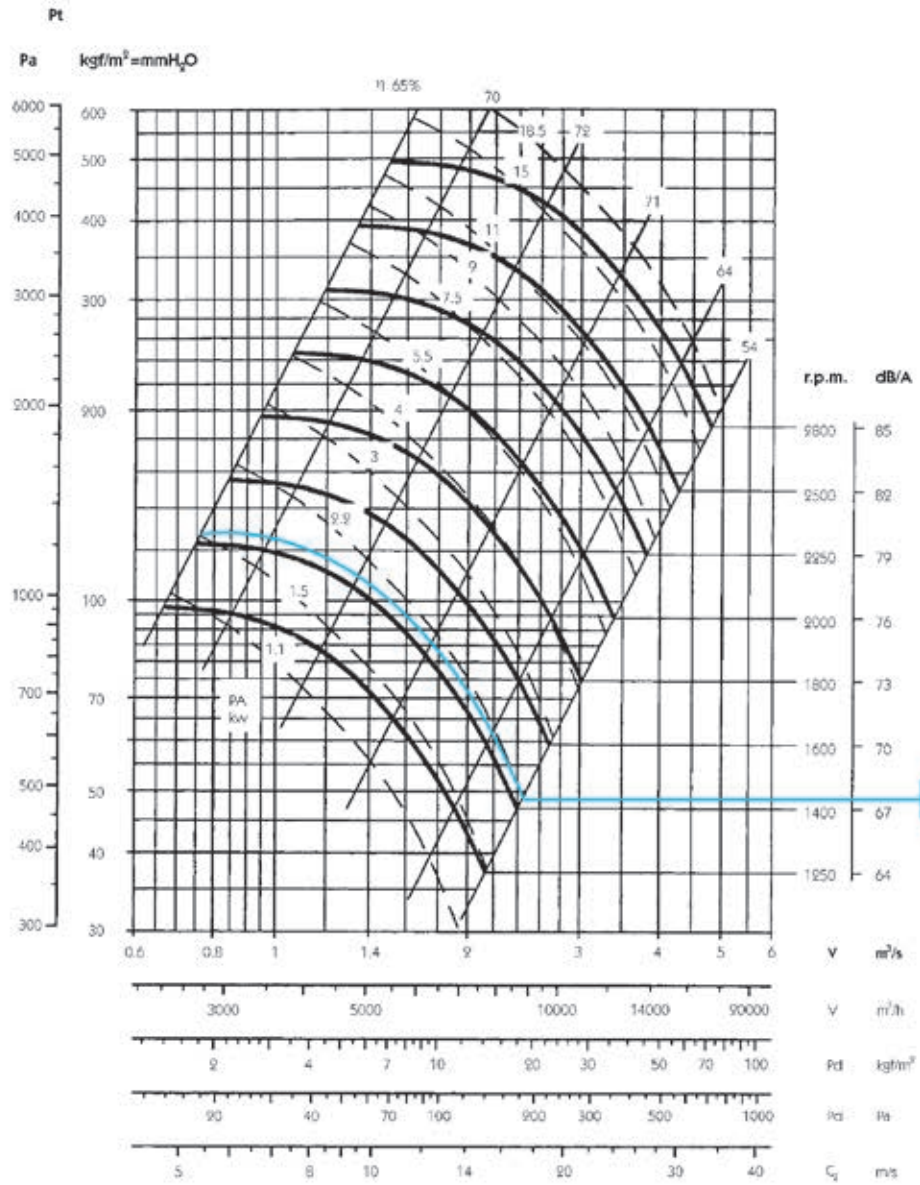
RPM

Characteristics for:  
system 4 and 5 in direct  
drive motor with 2/4/6/8  
poles depending on the  
model.



Characteristic curves

MA 560



Flow margin ±5%  
 Noise level margin +3 dB  
 Margin of kW absorbed ±3%  
 Impulsion characteristics

Maximum admissible RPM

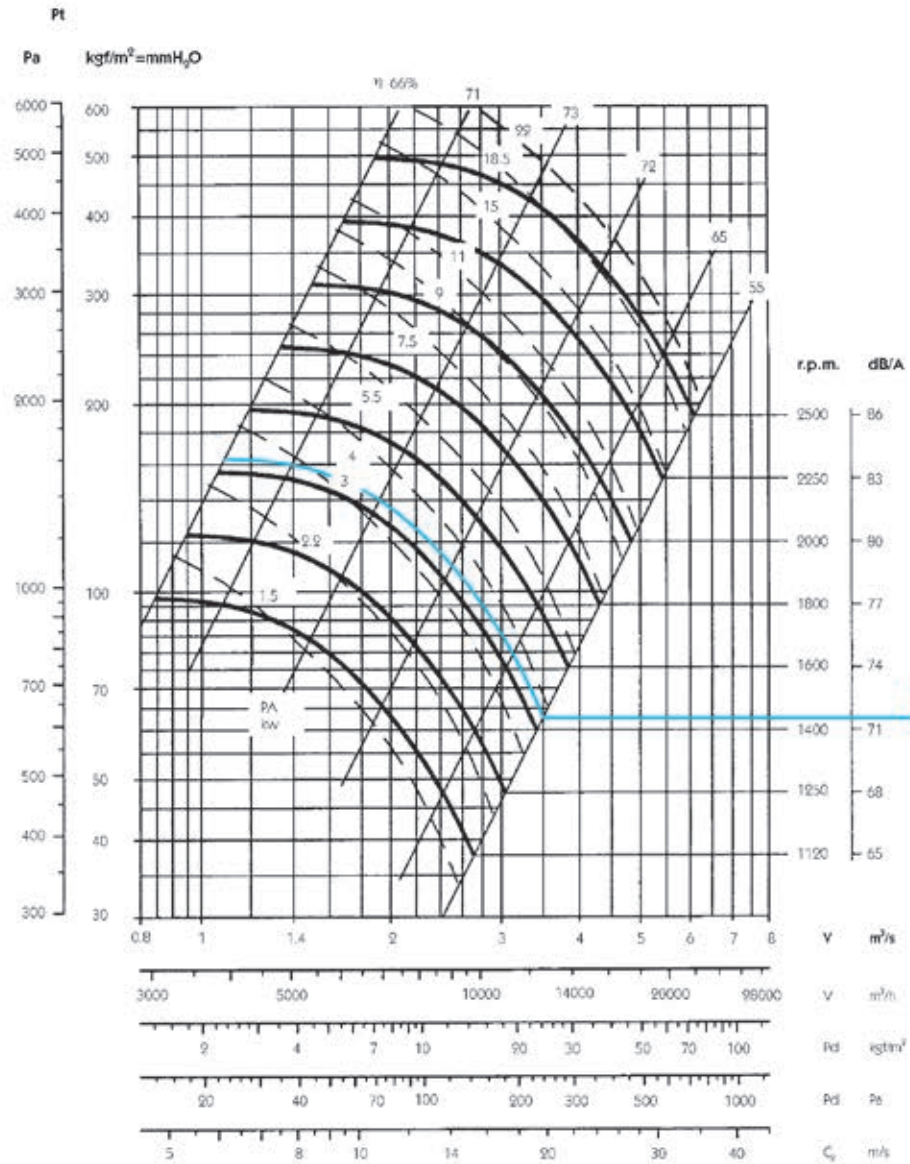
Class 1	
≤ 100°C	2500
100 ... 200°C	2250
200 ... 300°C	2000

RPM

Characteristics for:  
 system 4 and 5 in direct  
 drive motor with 2/4/6/8  
 poles depending on the  
 model.

## Characteristic curves

### MA 630



Flow margin  $\pm 5\%$   
Noise level margin +3 dB  
Margin of kW absorbed  $\pm 3\%$

Impulsion characteristics

Maximum admissible RPM

Class 1	
$\leq 100^\circ\text{C}$	2250
100 ... 200 $^\circ\text{C}$	2000
200 ... 300 $^\circ\text{C}$	1800

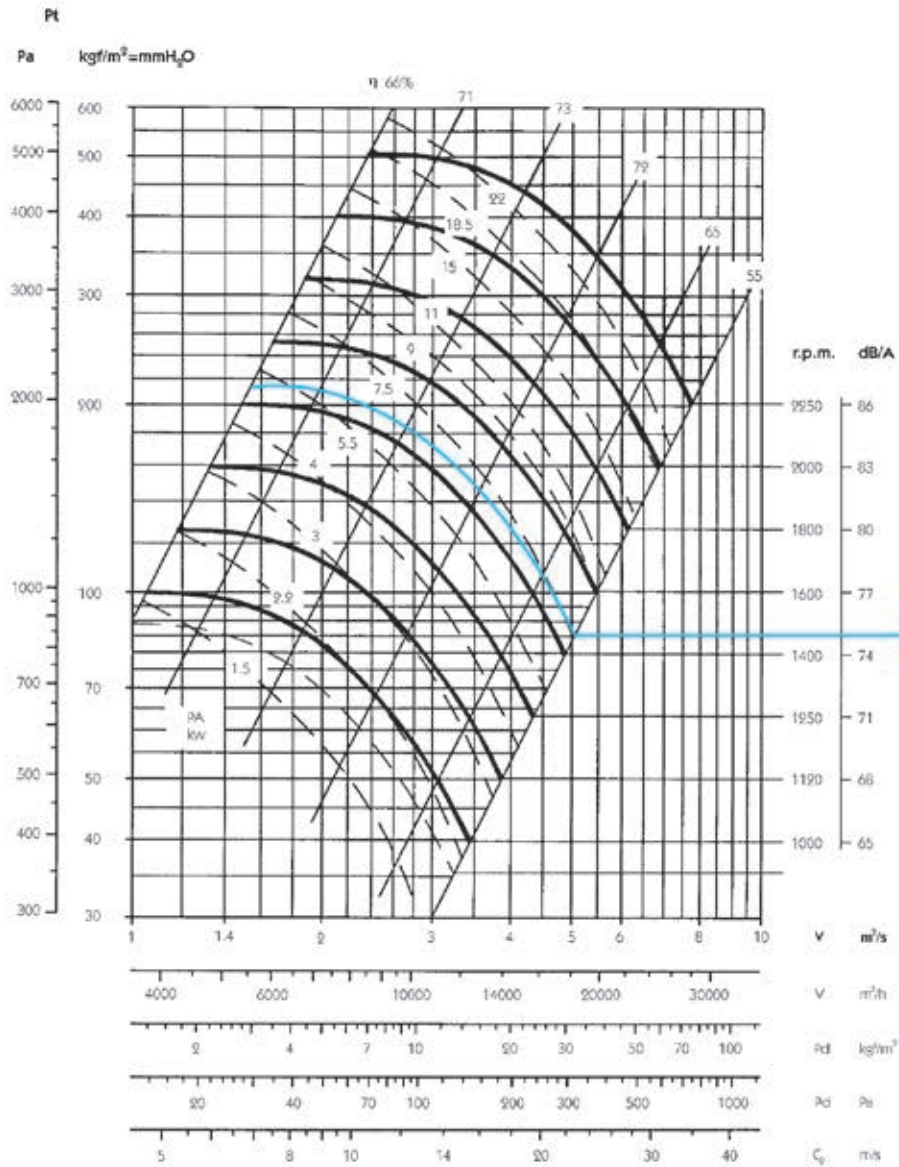
**RPM**

Characteristics for:  
system 4 and 5 in direct  
drive motor with 2/4/6/8  
poles depending on the  
model.



Characteristic curves

MA 710



Flow margin ±5%  
 Noise level margin +3 dB  
 Margin of kW absorbed ±3%  
 Impulsion characteristics

Maximum admissible RPM

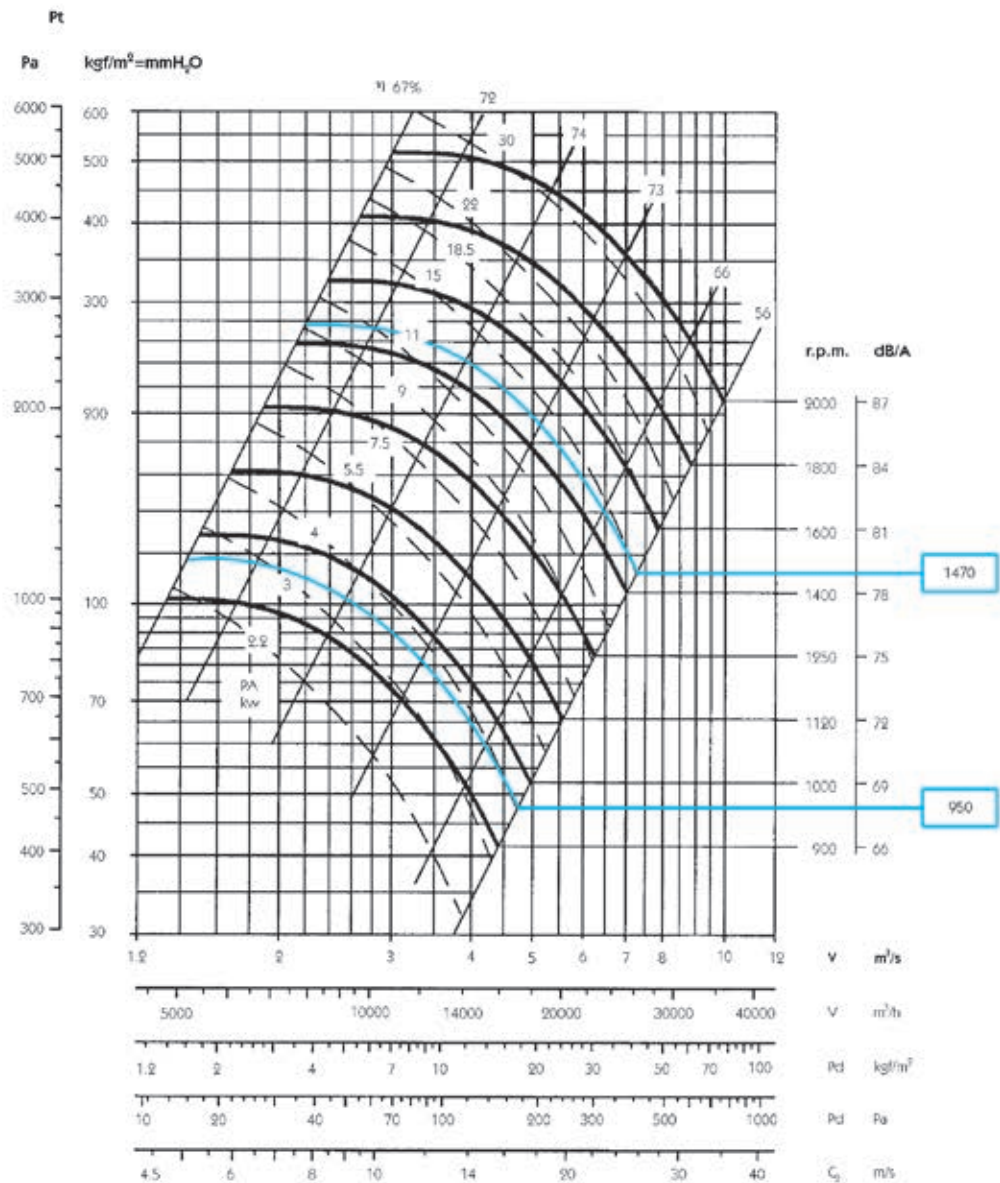
Class 1	
≤ 100°C	2000
100 ... 200°C	1800
200 ... 300°C	1600

**RPM** Characteristics for:  
 system 4 and 5 in direct  
 drive motor with 2/4/6/8  
 poles depending on the  
 model.



## Characteristic curves

### MA 800



Flow margin  $\pm 5\%$   
Noise level margin +3 dB  
Margin of kW absorbed  $\pm 3\%$

Impulsion characteristics

Maximum admissible RPM

**Class 1**

$\leq 100^{\circ}\text{C}$	1800
100 ... 200 $^{\circ}\text{C}$	1600
200 ... 300 $^{\circ}\text{C}$	1400

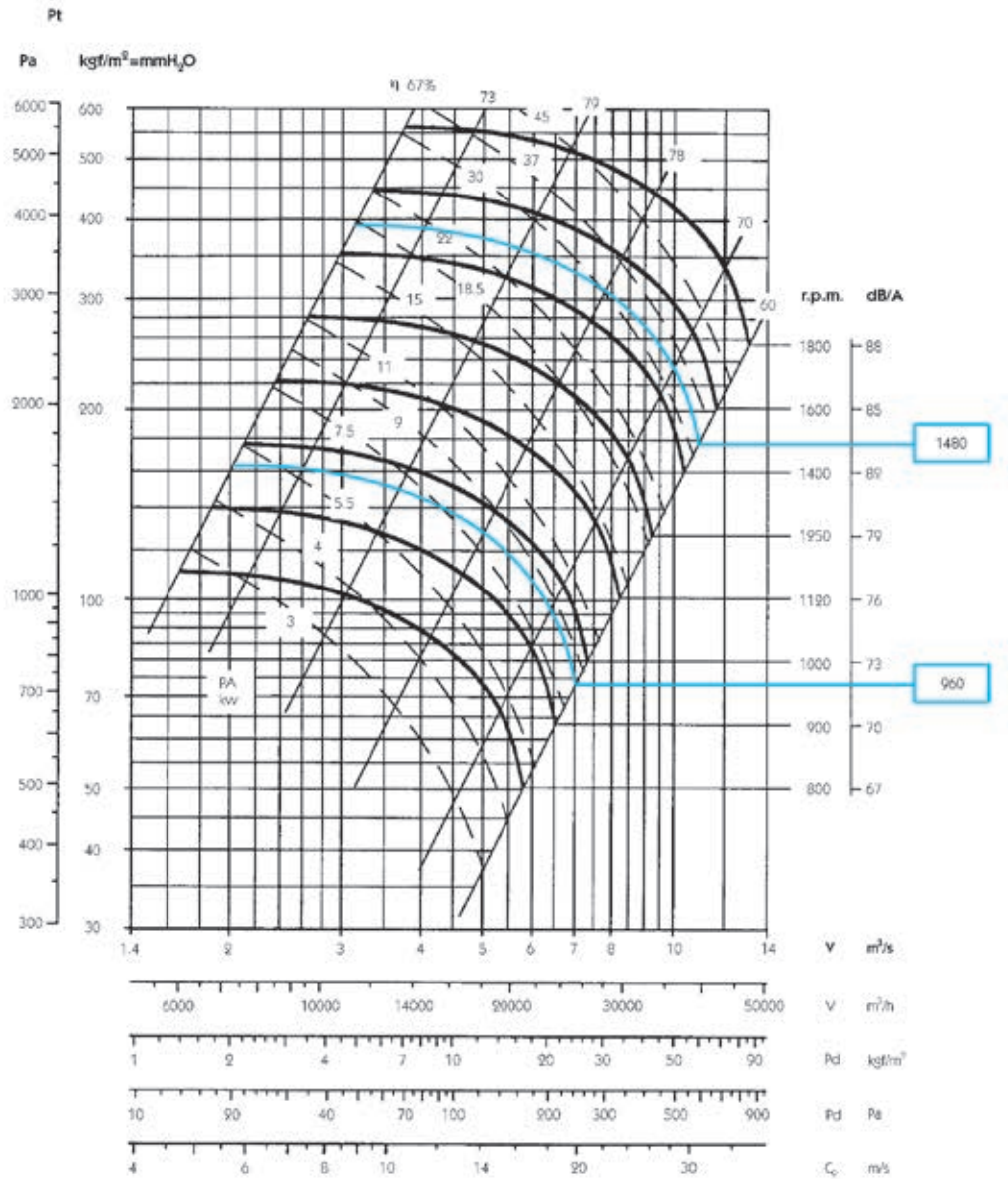
**RPM**

Characteristics for:  
system 4 and 5 in direct  
drive motor with 2/4/6/8  
poles depending on the  
model.



Characteristic curves

MA 900



Flow margin ±5%  
 Noise level margin +3 dB  
 Margin of kW absorbed ±3%  
 Impulsion characteristics

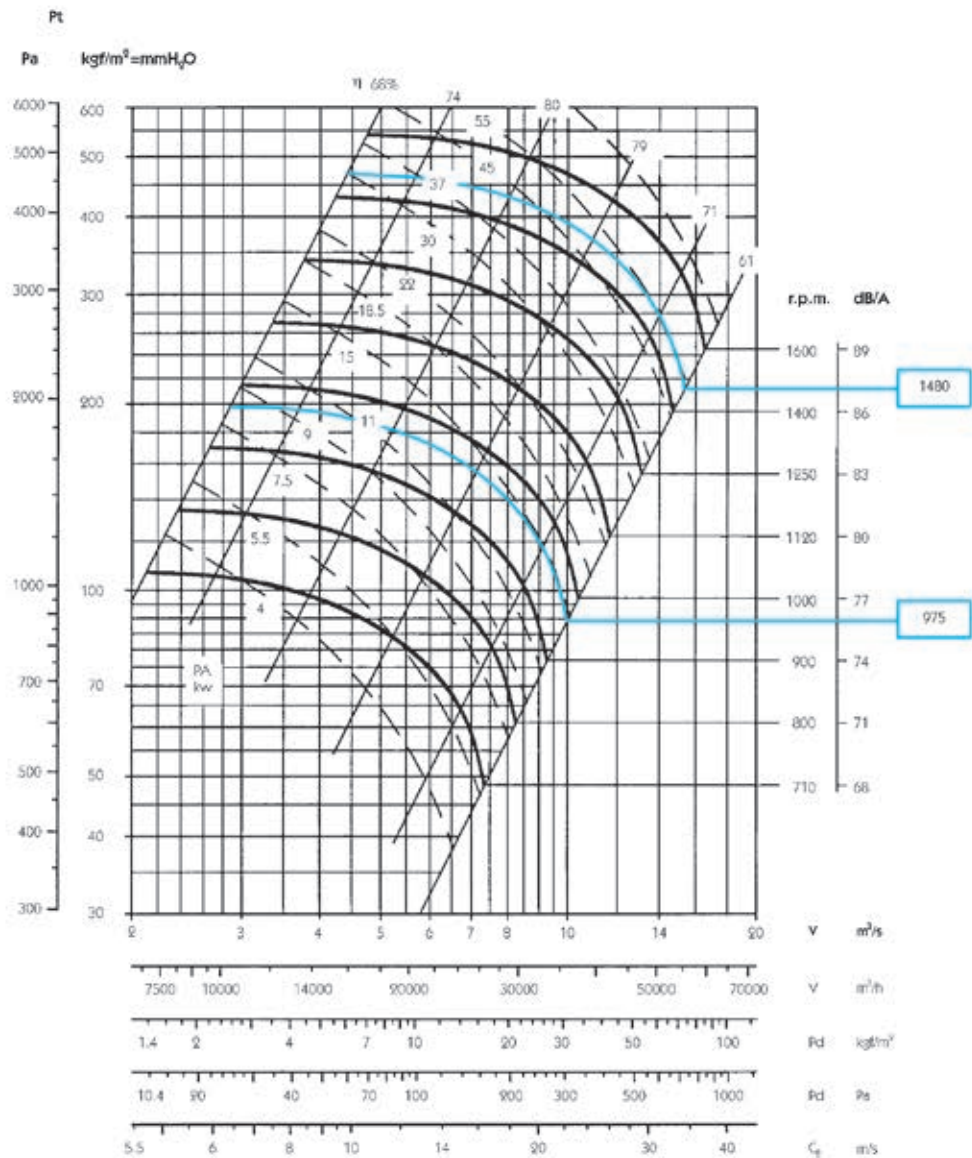
Maximum admissible RPM

Class 1	
≤ 100°C	1600
100 ... 200°C	1400
200 ... 300°C	1250

**RPM** Characteristics for:  
 system 4 and 5 in direct  
 drive motor with 2/4/6/8  
 poles depending on the  
 model.

## Characteristic curves

### MA 1000



Flow margin  $\pm 5\%$   
 Noise level margin +3 dB  
 Margin of kW absorbed  $\pm 3\%$   
 Impulsion characteristics

Maximum admissible RPM

Class 1	
$\leq 100^\circ\text{C}$	1400
100 ... 200°C	1250
200 ... 300°C	1120

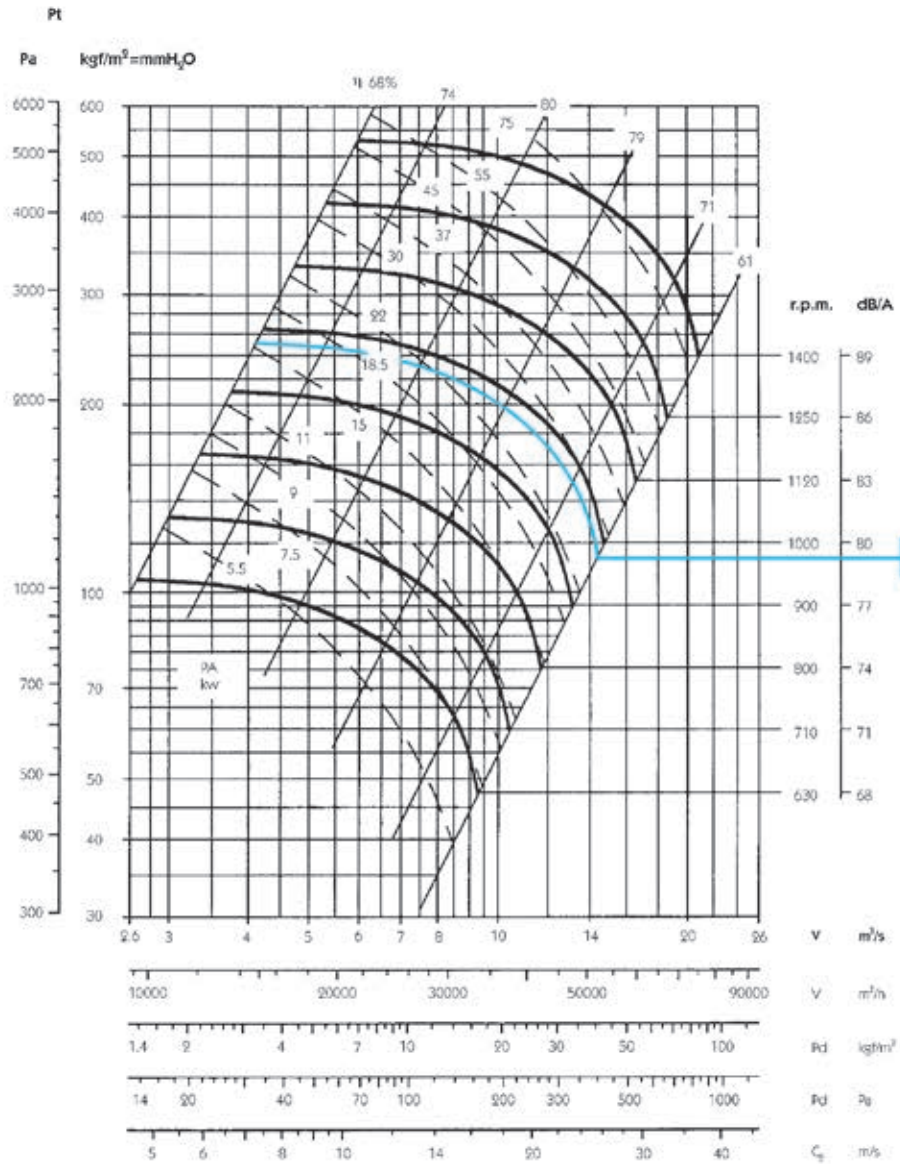
RPM

Characteristics for:  
 system 4 and 5 in direct  
 drive motor with 2/4/6/8  
 poles depending on the  
 model.



Characteristic curves

MA 1120



Flow margin ±5%  
 Noise level margin +3 dB  
 Margin of kW absorbed ±3%  
 Impulsion characteristics

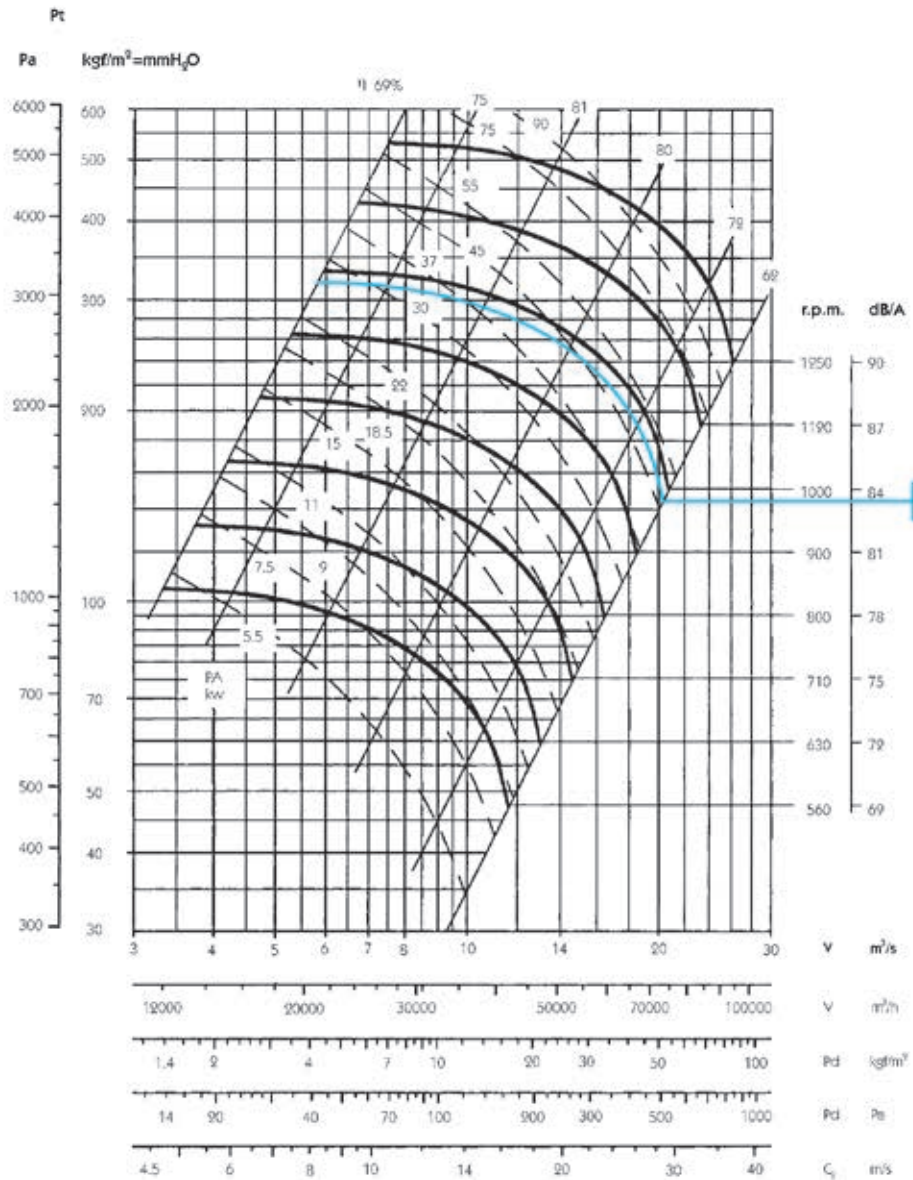
Maximum admissible RPM

Class 1	
≤ 100°C	1250
100 ... 200°C	1120
200 ... 300°C	1000

**RPM** Characteristics for:  
 system 4 and 5 in direct  
 drive motor with 2/4/6/8  
 poles depending on the  
 model.

## Characteristic curves

### MA 1250



Flow margin  $\pm 5\%$   
Noise level margin  $+3$  dB  
Margin of kW absorbed  $\pm 3\%$

Impulsion characteristics

Maximum admissible RPM

Class 1	
$\leq 100^\circ\text{C}$	1120
100 ... 200 $^\circ\text{C}$	1000
200 ... 300 $^\circ\text{C}$	900

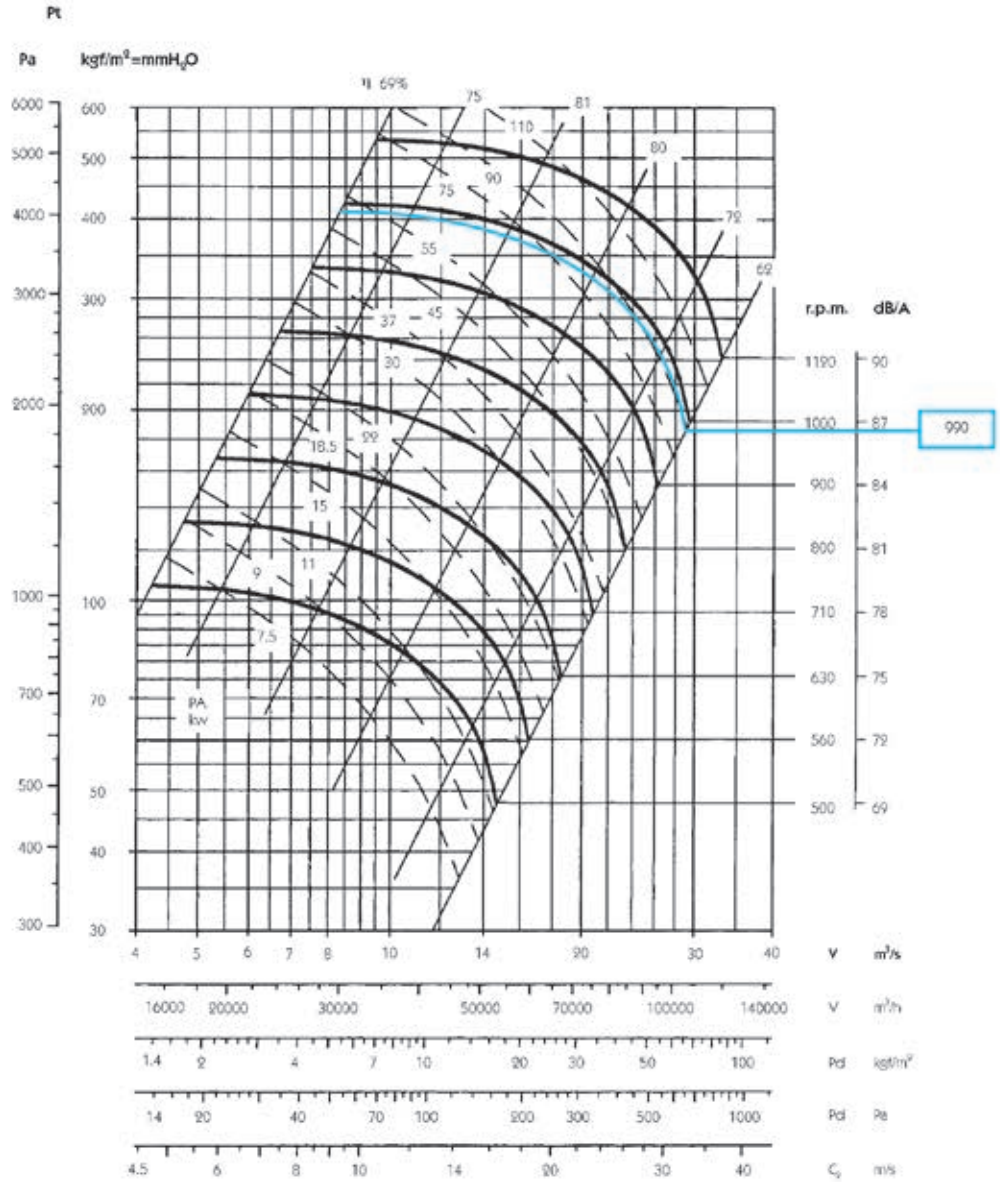
RPM

Characteristics for:  
system 4 and 5 in direct  
drive motor with 2/4/6/8  
poles depending on the  
model.



Characteristic curves

MA 1400



Flow margin ±5%  
 Noise level margin +3 dB  
 Margin of kW absorbed ±3%  
 Impulsion characteristics

Maximum admissible RPM

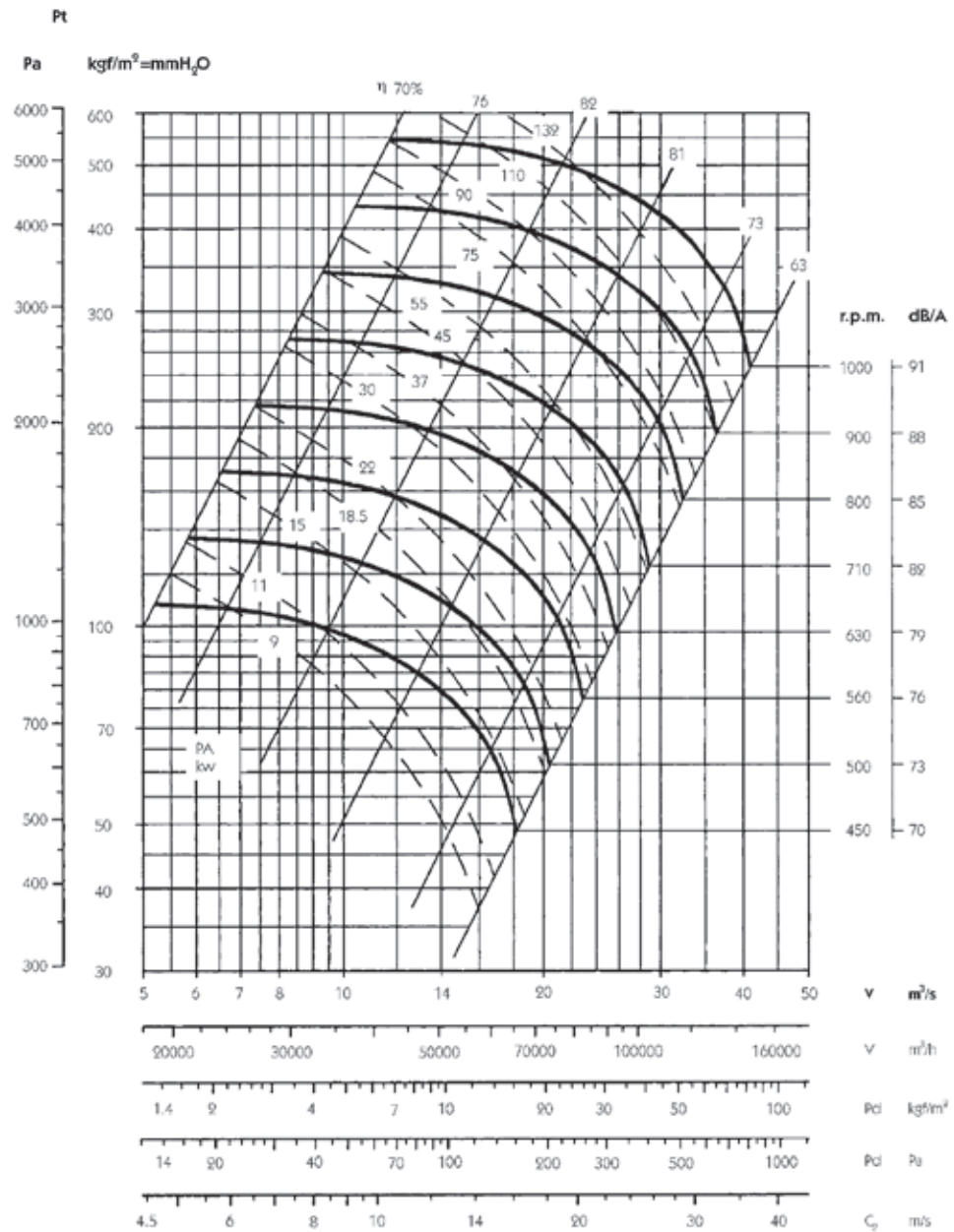
Class 1	
≤ 100°C	1000
100 ... 200°C	900
200 ... 300°C	800

RPM

Characteristics for:  
 system 4 and 5 in direct  
 motor with 2/4/6/8 poles  
 depending on the model.

## Characteristic curves

### MA 1600



Flow margin  $\pm 5\%$   
Noise level margin  $+3$  dB  
Margin of kW absorbed  $\pm 3\%$

Maximum admissible RPM

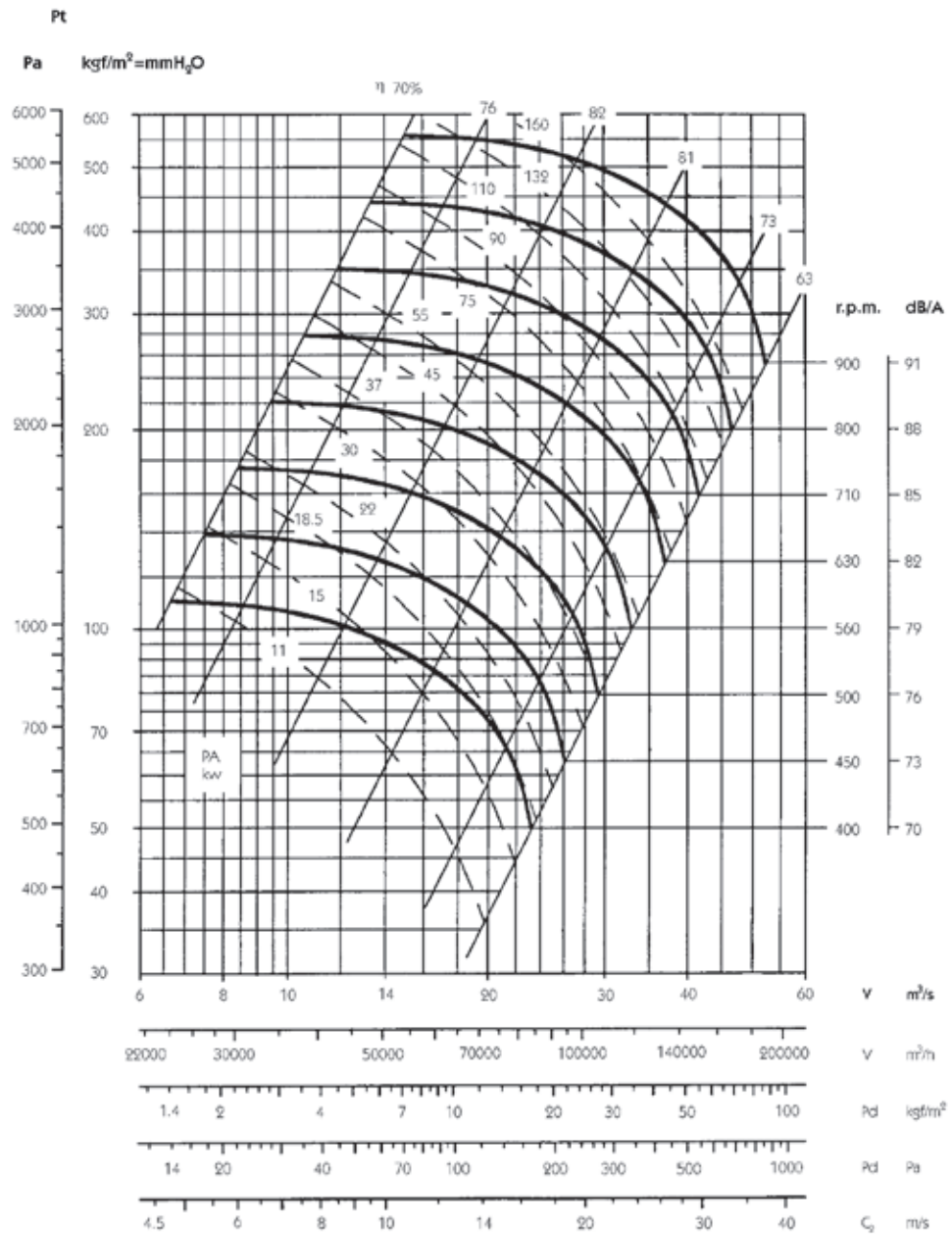
**Class 1**

$\leq 100^\circ\text{C}$	900
100 ... 200°C	800
200 ... 300°C	710



Characteristic curves

MA 1800



Flow margin ±5%  
 Noise level margin +3 dB  
 Margin of kW absorbed ±3%

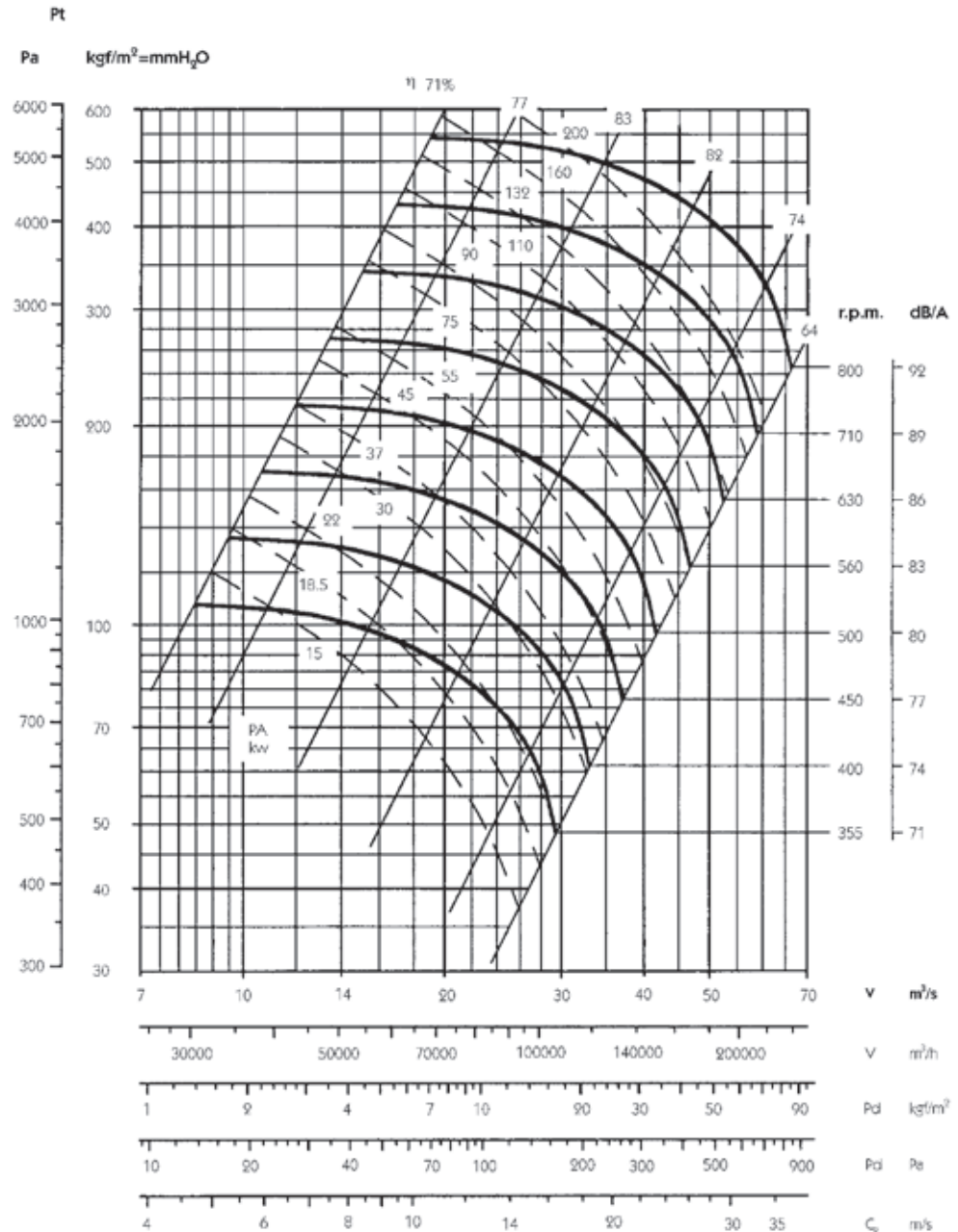
Maximum admissible RPM

Class 1	
≤ 100°C	800
100 ... 200°C	710
200 ... 300°C	630



## Characteristic curves

### MA 2000



Flow margin  $\pm 5\%$   
Noise level margin +3 dB  
Margin of kW absorbed  $\pm 3\%$

Maximum admissible RPM

**Class 1**

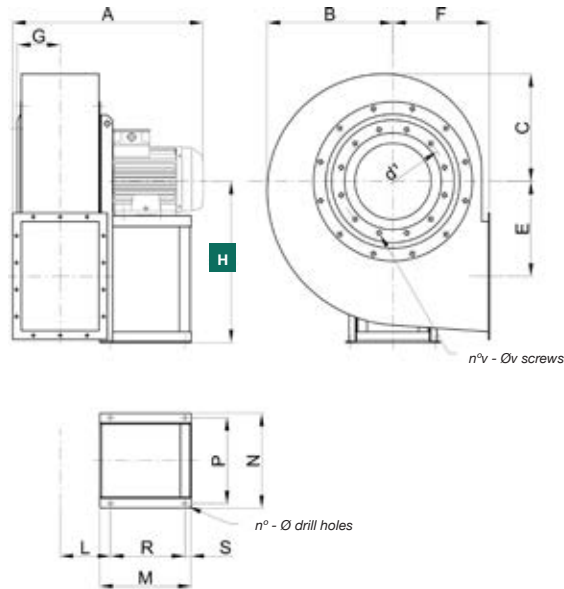
$\leq 100^\circ\text{C}$	710
100 ... 200°C	630
200 ... 300°C	560



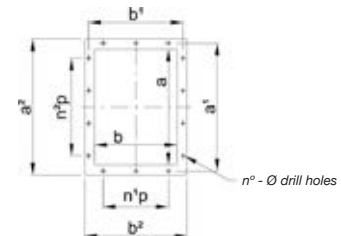
Dimensions mm

SYSTEM  
**4**

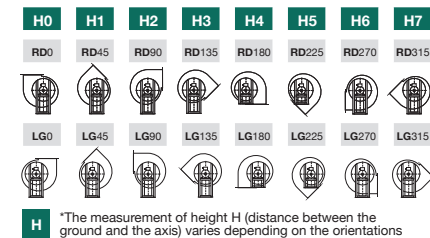
**MA 250...500**



**OUTLET NOZZLE**



**ORIENTATIONS**



**H** \*The measurement of height H (distance between the ground and the axis) varies depending on the orientations

MOD.	FRAME	A*	B	C	E	F	G	HO-1-2-3	H4-5	H6-7	L	M*	N	P	R*	S
MA 250/B	63 B/2	390	240	210	175	195	86	315	195	315	126	150	224	200	75	25
MA 250/A	71 A/2	405	240	210	175	195	86	315	195	315	126	190	244	220	115	25
MA 280/B	71 B/2	420	265	225	202	200	95	375	200	375	135	190	244	220	115	25
MA 280/A	80 A/2	450	265	225	202	200	95	375	200	375	135	190	244	220	115	25
MA 310/B	80 B/2	465	300	255	229	225	105	400	225	400	144	190	244	220	115	25
MA 310/A	90 S/2	480	300	255	229	225	105	400	225	400	144	215	269	245	140	25
MA 350/B	90 S/2	505	335	285	253	255	116	450	255	450	155	215	269	245	140	25
MA 350/A	90 L/2	530	335	285	253	255	116	450	255	450	155	215	269	245	140	25
MA 400/B	100 LA/2	585	380	320	286	285	126	500	285	500	168	260	312	280	185	25
MA 400/A	112 M/2	585	380	320	286	285	126	500	285	500	168	260	312	280	185	25
MA 450/B	132 SA/2	700	425	360	321	320	142	560	320	560	182	320	342	310	245	25
MA 450/A	132 SB/2	700	425	360	321	320	142	560	320	560	182	320	342	310	245	25
MA 500/B	160 MA/2	805	470	405	355	360	146	600	360	600	198	425	440	400	345	30
MA 500/A	160 MB/2	805	470	405	355	360	146	600	360	600	198	425	440	400	345	30
MA 500/B	90 S/4	590	470	405	355	360	146	600	360	600	198	215	269	245	140	25
MA 500/A	90 L/4	615	470	405	355	360	146	600	360	600	198	215	269	245	140	25

**OUTLET NOZZLE**

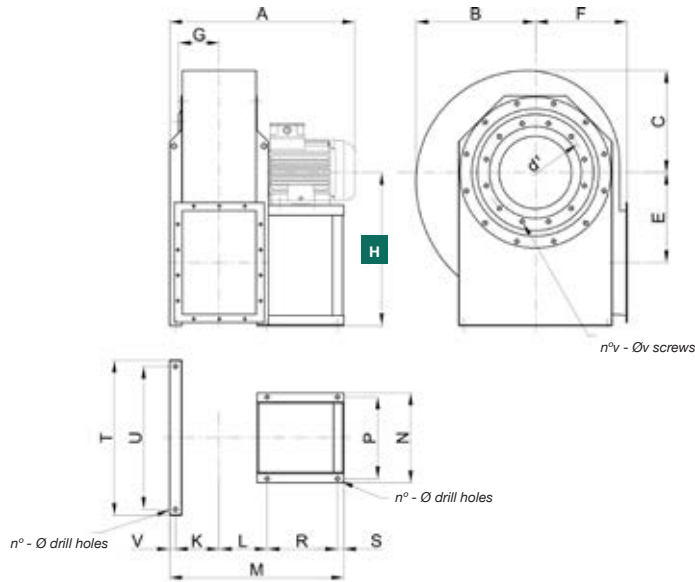
MOD.	n°	Ø	d¹	n°v	Øv	a	b	a¹	b¹	a²	b²	n¹p	n²p	n¹f	øf	kg	WD²
MA 250/B	4	10	219	8	M6	205	146	241	182	275	216	1-112	1-112	8	12	20	0.1
MA 250/A	4	10	219	8	M6	205	146	241	182	275	216	1-112	1-112	8	12	23	0.11
MA 280/B	4	10	241	8	M6	229	164	265	200	299	234	1-112	1-112	8	12	30	0.15
MA 280/A	4	10	241	8	M6	229	164	265	200	299	234	1-112	1-112	8	12	32	0.16
MA 310/B	4	10	265	8	M6	256	183	292	219	326	253	1-112	2-112	10	12	40	0.2
MA 310/A	4	10	265	8	M6	256	183	292	219	326	253	1-112	2-112	10	12	43	0.22
MA 350/B	4	10	292	8	M8	288	205	332	249	368	285	1-125	2-125	10	12	65	0.45
MA 350/A	4	10	292	8	M8	288	205	332	249	368	285	1-125	2-125	10	12	70	0.5
MA 400/B	4	12	332	8	M8	322	229	366	273	402	309	1-125	2-125	10	12	100	0.7
MA 400/A	4	12	332	8	M8	322	229	366	273	402	309	1-125	2-125	10	12	105	0.9
MA 450/B	4	12	366	8	M8	361	256	405	300	441	336	1-125	2-125	10	12	140	1.1
MA 450/A	4	12	366	8	M8	361	256	405	300	441	336	1-125	2-125	10	12	150	1.4
MA 500/B	4	14	405	8	M8	404	288	448	332	484	368	2-125	3-125	14	12	225	2.5
MA 500/A	4	14	405	8	M8	404	288	448	332	484	368	2-125	3-125	14	12	240	2.8
MA 500/B	4	10	405	8	M8	404	288	448	332	484	368	2-125	3-125	14	12	125	2
MA 500/A	4	10	405	8	M8	404	288	448	332	484	368	2-125	3-125	14	12	130	2.2

(\*) For "HIGH TEMP." constructions, elevations "A-M-R" + 50 mm.  
(kg) = Weight of fan with motor.  
WD² = Moment of inertia of the impeller, expressed in kg x m²

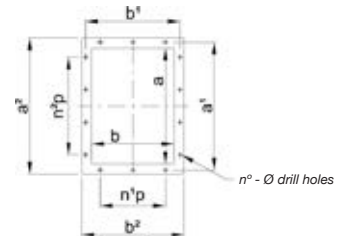
Dimensions mm

SYSTEM  
**4**

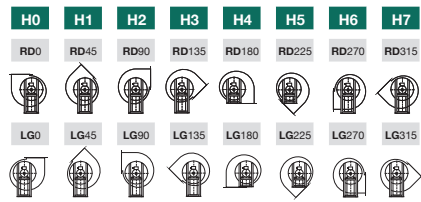
**MA 560...630**



**OUTLET NOZZLE**



**ORIENTATIONS**



**H** \*The measurement of height H (distance between the ground and the axis) varies depending on the orientations

MOD.	FRAME	A*	B	C	E	F	G	HO-1-2-3	H4-5	H6-7	L	K	M*
MA 560/B	160 L/2	950	525	445	390	400	175	670	400	670	214	196	808
MA 560/A	180 M/2	990	525	445	390	400	175	670	400	670	234	196	853
MA 560/B	100 LA/4	710	525	445	390	400	175	670	400	670	214	196	643
MA 560/A	100 LB/4	710	525	445	390	400	175	670	400	670	214	196	643
MA 630/B	112 M/4	750	590	505	441	450	199	750	450	750	234	217	684
MA 630/A	132 S/4	840	590	505	441	450	199	750	450	750	234	217	744

MOD.	N	P	R*	S	T	U	V	n°	Ø	Ø¹	d¹	n°v	Øv
MA 560/B	440	400	345	30	690	630	23	4	14	17	448	12	M8
MA 560/A	490	450	370	30	690	630	23	4	17	17	448	12	M8
MA 560/B	312	280	185	25	690	630	23	4	12	17	448	12	M8
MA 560/A	312	280	185	25	690	630	23	4	12	17	448	12	M8
MA 630/B	312	280	185	25	760	700	23	4	12	17	497	12	M8
MA 630/A	342	310	245	25	760	700	23	4	12	17	497	12	M8

**OUTLET NOZZLE**

MOD.	a	b	a¹	b¹	a²	b²	n¹p	n²p	n³f	of	kg	WD²
MA 560/B	453	322	497	366	533	402	2-125	3-125	14	12	280	3.5
MA 560/A	453	322	497	366	533	402	2-125	3-125	14	12	310	4
MA 560/B	453	322	497	366	533	402	2-125	3-125	14	12	140	3.2
MA 560/A	453	322	497	366	533	402	2-125	3-125	14	12	140	3.5
MA 630/B	507	361	551	405	587	441	2-125	3-125	14	12	180	5.5
MA 630/A	507	361	551	405	587	441	2-125	3-125	14	12	190	6.2

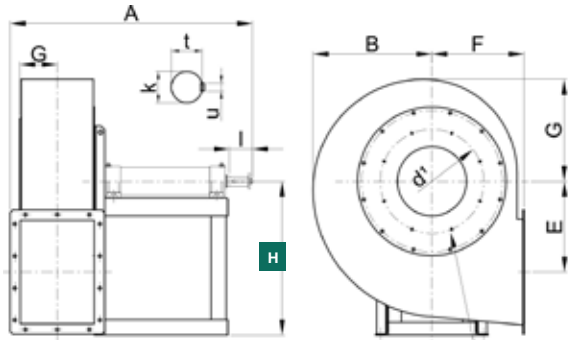
(\*) For "HIGH TEMP." constructions, elevations "A-M-R" + 50 mm.  
 (kg) = Weight of fan with motor.  
 WD² = Moment of inertia of the impeller, expressed in kg x m²



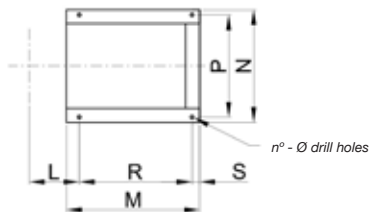
Dimensions mm

MA 250...500

SYSTEM  
**1**

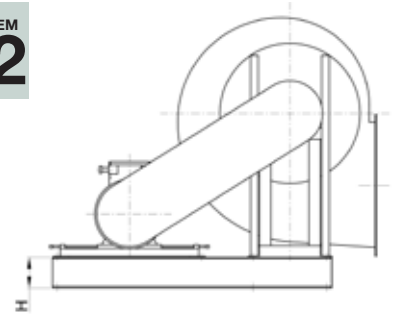


n° - Øv screws

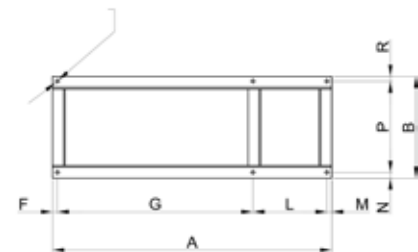


n° - Ø drill holes

SYSTEM  
**12**



n° - Ø drill holes



MOD.	A*	B	C	E	F	G	H0	H1	H2	H3	H4	H5
MA 250	465	240	210	175	195	86	315	315	315	315	195	195
MA 280	560	265	225	202	200	95	375	375	375	375	200	200
MA 310	580	300	255	229	225	105	400	400	400	400	225	225
MA 350	805	335	285	253	255	116	450	450	450	450	255	255
MA 400	930	380	320	286	285	126	500	500	500	500	285	285
MA 450	960	425	360	321	320	142	560	560	560	560	320	320
MA 500	1000	470	405	355	360	158	600	600	600	600	360	360

MOD.	A	B*	H	F	G	L	M	N	P*	R	N°	Φ	kg
MA 250	700	185	80	15	480	190	15	20	145	20	6	10	19
MA 280	895	265	100	20	630	230	15	25	215	25	6	12	30
MA 310	895	265	100	20	630	230	15	25	215	25	6	12	30
MA 350	980	450	120	20	630	310	20	25	400	25	6	14	45
MA 400	1020	530	120	20	650	330	20	25	480	25	6	14	50
MA 450	1175	530	120	25	800	330	20	25	480	25	6	14	55
MA 500	1265	495	160	25	830	385	25	30	430	35	6	17	78

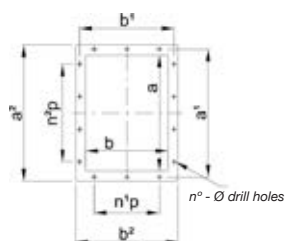
(\*) For "HIGH TEMP." constructions in models 250 to 500, elevations "B-P" + 50 mm.  
kg = Weight of the support base

MOD.	H6	H7	L	M*	N	P	R*	S	n°	Φ	k	l
MA 250	315	315	126	220	214	190	145	25	4	10	19k6	40
MA 280	375	375	135	290	254	230	215	25	4	12	24k6	50
MA 310	400	400	144	290	254	230	215	25	4	12	24k6	50
MA 350	450	450	155	480	350	310	400	30	4	14	28k6	60
MA 400	500	500	168	560	370	330	480	30	4	14	38k6	80
MA 450	560	560	182	560	370	330	480	30	4	14	38k6	80
MA 500	600	600	198	520	438	385	430	40	4	17	42k6	110

MOD.	t	u	d <sup>1</sup>	n°v	Φv	kg	WD <sup>2</sup>
MA 250	21,5	6	219	8	M6	27	0.11
MA 280	27	8	241	8	M6	27	0.16
MA 310	27	8	265	8	M6	43	0.22
MA 350	31	8	292	8	M8	73	0.5
MA 400	41	10	332	8	M8	85	0.9
MA 450	41	10	366	8	M8	105	1.4
MA 500	45	12	405	8	M8	145	2.8

(\*) For "HIGH TEMP." constructions in models 250 to 500, elevations "A-M-R" + 50 mm.  
(kg) = Weight of fan without motor.  
WD<sup>2</sup> = Moment of inertia of the impeller, expressed in kg x m<sup>2</sup>

OUTLET NOZZLE



n° - Ø drill holes

OUTLET NOZZLE

MOD.	a	b	a'	b'	a''	b''	n°p	n°f	Φf
MA 250	205	146	241	182	275	216	1-112	1-112	8
MA 280	229	164	265	200	299	234	1-112	1-112	8
MA 310	256	183	292	219	326	253	1-112	2-112	10
MA 350	288	205	332	249	368	285	1-125	2-125	10
MA 400	322	229	366	273	402	309	1-125	2-125	10
MA 450	361	256	405	300	441	336	1-125	2-125	10
MA 500	404	288	448	332	484	368	2-125	3-125	14

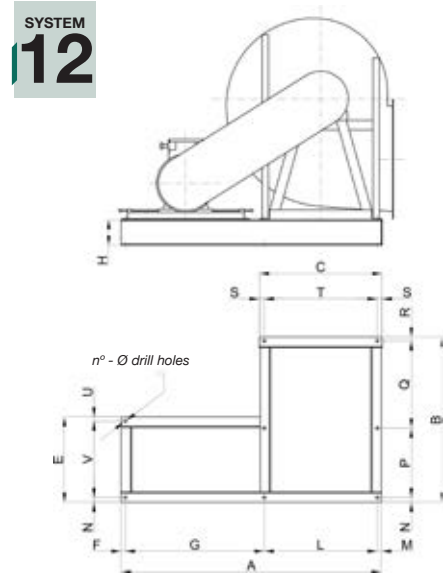
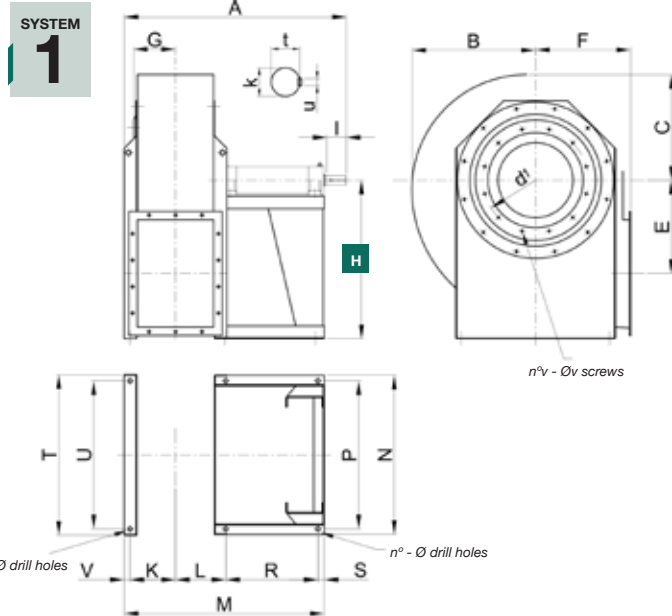
ORIENTATIONS

H0	H1	H2	H3	H4	H5	H6	H7
RD0	RD45	RD90	RD135	RD180	RD225	RD270	RD315
LG0	LG45	LG90	LG135	LG180	LG225	LG270	LG315

H The measurement of height H (distance between the ground and the axis) varies depending on the orientations

Dimensions mm

MA 560...630



MOD.	A*	B	C	E	F	G	H0	H1	H2	H3
MA 560	1055	525	445	390	400	175	670	670	670	670
MA 630	1095	590	505	441	450	199	750	750	750	750

MOD.	A	B*	C	E	H	F	G	L	M	N
MA 560	1415	893	690	510	160	25	735	630	25	30
MA 630	1610	933	760	530	160	25	860	700	25	30

MOD.	H4	H5	H6	H7	L	K	M*	N	P	R*
MA 560	400	400	670	670	214	196	903	683	630	430
MA 630	450	450	750	750	233	217	943	753	700	430

MOD.	P*	Q	R	S	T	U	V	N°	Φ	kg
MA 560	430	410	23	30	630	25	455	8	17	105
MA 630	430	450	23	30	700	25	475	8	17	115

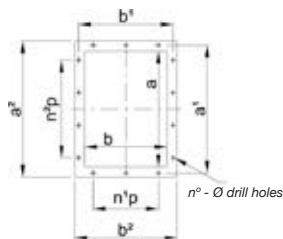
MOD.	S	T	U	V	n°	Φ	k	l	t	u
MA 560	40	690	630	23	4+2	17	48k6	110	51.5	14
MA 630	40	760	700	23	4+2	17	48k6	110	51.5	14

MOD.	d <sup>1</sup>	n°v	Φv	kg	WD <sup>2</sup>
MA 560	448	12	M8	175	4
MA 630	497	12	M8	210	6.6

(\*) For "HIGH TEMP." constructions in models 560 to 630, elevations "B-P" + 50 mm.  
kg = Weight of the support base

(\*) For "HIGH TEMP." constructions in models 560 to 630, elevations "A-M-R" + 50 mm.  
(kg) = Weight of fan without motor.  
WD<sup>2</sup> = Moment of inertia of the impeller, expressed in kg x m<sup>2</sup>

OUTLET NOZZLE



OUTLET NOZZLE

MOD.	a	b	a'	b'	a''	b''	n°p	n°v	n°f	Φf
MA 560	453	322	497	366	533	402	2-125	3-125	14	12
MA 630	507	361	551	405	587	441	2-125	3-125	14	12

ORIENTATIONS

H0	H1	H2	H3	H4	H5	H6	H7
RD0	RD45	RD90	RD135	RD180	RD225	RD270	RD315
LG0	LG45	LG90	LG135	LG180	LG225	LG270	LG315

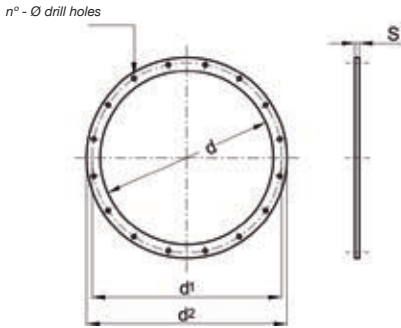
H \*The measurement of height H (distance between the ground and the axis) varies depending on the orientations





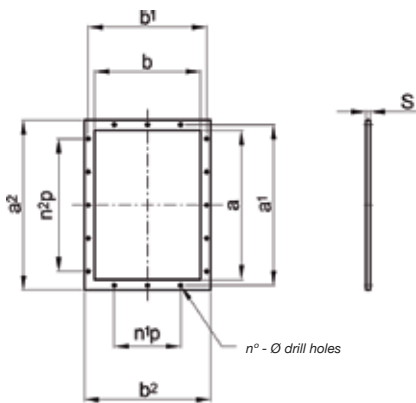
Accessories

Inlet counter-flange



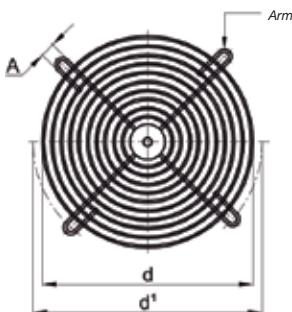
MOD.	d	d <sup>1</sup>	d <sup>2</sup>	n°	Φ	S	kg
MA 250	185	219	255	8	9	4	0.7
MA 280	205	241	275	8	9	4	0.75
MA 310	229	265	299	8	9	4	0.8
MA 350	255	292	325	8	11	4	1
MA 400	286	332	366	8	11	5	1.6
MA 450	321	366	401	8	11	5	1.8
MA 500	361	405	441	8	11	5	2
MA 560	406	448	486	12	11	5	2.2
MA 630	456	497	536	12	11	5	2.5
MA 710	506	551	586	12	11	5	2.7
MA 800	568	629	668	12	11	6	4.6
MA 900	638	698	738	12	11	6	5
MA 1000	718	775	818	16	13	6	5.5
MA 1120	808	861	908	16	13	6	6.2
MA 1250	908	958	1008	16	13	6	7
MA 1400	1008	1067	1108	24	13	6	7.8
MA 1600	1130	1200	1250	24	13	8	14
MA 1800	1260	1337	1380	24	13	8	15.5
MA 2000	1410	1491	1530	32	13	8	17

Impulsion counter-flange



MOD.	a	b	a <sup>1</sup>	b <sup>1</sup>	a <sup>°</sup>	b <sup>°</sup>	n°p	n°p	n°	Φ	s	kg
MA 250	205	146	241	182	275	216	1-112	1-112	8	12	4	0.9
MA 280	229	164	265	200	299	234	1-112	1-112	8	12	4	1
MA 310	256	183	292	219	326	253	1-112	2-112	10	12	4	1.1
MA 350	288	205	332	249	368	285	1-125	2-125	10	12	5	1.8
MA 400	322	229	366	273	402	309	1-125	2-125	10	12	5	2
MA 450	361	256	405	300	441	336	1-125	2-125	10	12	5	2.2
MA 500	404	288	448	332	484	368	2-125	3-125	14	12	5	2.4
MA 560	453	322	497	366	533	402	2-125	3-125	14	12	5	2.7
MA 630	507	361	551	405	587	441	2-125	3-125	14	12	5	3
MA 710	569	404	629	464	669	504	2-160	3-160	14	14	6	5
MA 800	638	453	698	513	738	553	2-160	3-160	14	14	6	5.6
MA 900	715	507	775	567	815	607	2-160	4-160	16	14	6	6.2
MA 1000	801	569	871	639	921	689	2-200	3-200	14	14	8	11.2
MA 1120	898	638	968	708	1018	758	3-200	4-200	18	14	8	12.5
MA 1250	1007	715	1077	785	1127	835	3-200	4-200	18	14	8	14
MA 1400	1130	801	1210	881	1270	941	3-200	5-200	20	18	8	18
MA 1600	1267	898	1347	978	1407	1038	4-200	6-200	24	18	8	20
MA 1800	1421	1007	1501	1087	1561	1147	4-200	6-200	24	18	8	22.3
MA 2000	1593	1130	1683	1220	1753	1290	5-200	7-200	28	22	8	28.5

Inlet protection net

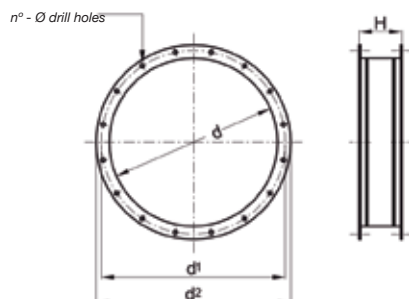


MOD.	d	d <sup>1</sup>	A	n°	kg
MA 250	185	222	9	4	0.18
MA 280	205	332	9	4	0.2
MA 310	229	366	9	4	0.25
MA 350	255	405	11	4	0.3
MA 400	286	448	11	4	0.35
MA 450	321	497	11	4	0.4
MA 500	361	551	11	8	0.7
MA 560	406	629	11	8	0.8
MA 630	456	698	11	8	0.9
MA 710	506	775	11	8	1
MA 800	568	861	11	8	1.2
MA 900	638	958	11	8	1.5
MA 1000	718	1067	13	8	2
MA 1120	808	1200	13	8	2.5
MA 1250	908	1337	13	8	3
MA 1400	1008	1491	13	8	3.5
MA 1600	1130	1663	13	8	4
MA 1800	1260	1856	13	8	4.5
MA 2000	1410	2073	13	8	5



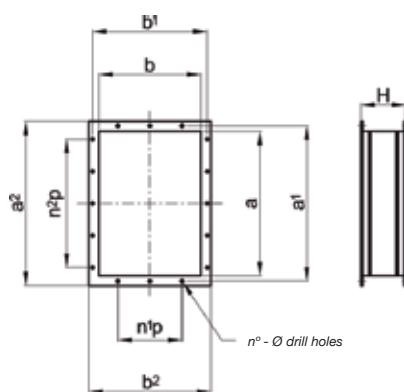
## Accessories

### Inlet anti-vibration seal



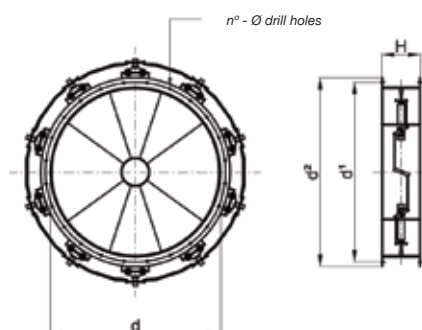
MOD.	d	d <sup>1</sup>	d <sup>2</sup>	n°	Φ	H	kg
MA 250	185	219	255	8	9	200	1.7
MA 280	205	241	275	8	9	200	1.8
MA 310	229	265	299	8	9	200	2
MA 350	255	292	325	8	11	200	2.2
MA 400	286	332	366	8	11	200	3.4
MA 450	321	366	401	8	11	200	3.8
MA 500	361	405	441	8	11	200	4.2
MA 560	406	448	486	12	11	200	4.6
MA 630	456	497	536	12	11	200	5.1
MA 710	506	551	586	12	11	200	5.6
MA 800	568	629	668	12	11	200	9.4
MA 900	638	698	738	12	11	200	10.4
MA 1000	718	775	818	16	13	200	11.6
MA 1120	808	861	908	16	13	200	13
MA 1250	908	958	1008	16	13	200	14.4
MA 1400	1008	1067	1108	24	13	200	16
MA 1600	1130	1200	1250	24	13	200	28.5
MA 1800	1260	1337	1380	24	13	200	31.5
MA 2000	1410	1491	1530	32	13	200	34.5

### Impulsion anti-vibration seal



MOD.	a	b	a <sup>1</sup>	b <sup>1</sup>	a <sup>2</sup>	b <sup>2</sup>	n <sup>1</sup> p	n <sup>2</sup> p	n°	Φ	H	kg
MA 250	205	146	241	182	275	216	1-112	1-112	8	12	200	2
MA 280	229	164	265	200	299	234	1-112	1-112	8	12	200	2.2
MA 310	256	183	292	219	326	253	1-112	2-112	10	12	200	2.4
MA 350	288	205	332	249	368	285	1-125	2-125	10	12	200	3.8
MA 400	322	229	366	273	402	309	1-125	2-125	10	12	200	4.2
MA 450	361	256	405	300	441	336	1-125	2-125	10	12	200	4.6
MA 500	404	288	448	332	484	368	2-125	3-125	14	12	200	5
MA 560	453	322	497	366	533	402	2-125	3-125	14	12	200	5.6
MA 630	507	361	551	405	587	441	2-125	3-125	14	12	200	6.2
MA 710	569	404	629	464	669	504	2-160	3-160	14	14	200	10.2
MA 800	638	453	698	513	738	553	2-160	3-160	14	14	200	11.4
MA 900	715	507	775	567	815	607	2-160	4-160	16	14	200	12.6
MA 1000	801	569	871	639	921	689	2-200	3-200	14	14	200	23
MA 1120	898	638	968	708	1018	758	3-200	4-200	18	14	200	25.5
MA 1250	1007	715	1077	785	1127	835	3-200	4-200	18	14	200	28.5
MA 1400	1130	801	1210	881	1270	941	3-200	5-200	20	18	200	37
MA 1600	1267	898	1347	978	1407	1038	4-200	6-200	24	18	200	41
MA 1800	1421	1007	1501	1087	1561	1147	4-200	6-200	24	18	200	45.5
MA 2000	1593	1130	1683	1220	1753	1290	5-200	7-200	28	22	200	58

### Flow regulator at the inlet

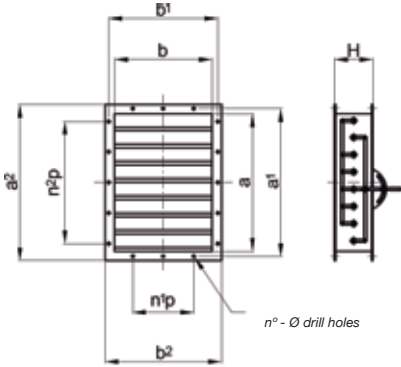


MOD.	d	d <sup>1</sup>	d <sup>2</sup>	n°	Φ	H	kg
MA 450	321	366	401	8	11	200	24
MA 500	361	405	441	8	11	250	26
MA 560	406	448	486	12	11	250	30
MA 630	456	497	536	12	11	250	32
MA 710	506	551	586	12	11	250	45
MA 800	568	629	668	12	11	250	50
MA 900	638	698	738	12	11	300	58
MA 1000	718	775	818	16	13	300	68
MA 1120	808	861	908	16	13	350	87
MA 1250	908	958	1008	16	13	350	102
MA 1400	1008	1067	1108	24	13	350	120
MA 1600	1130	1200	1250	24	13	400	150
MA 1800	1260	1337	1380	24	13	400	170
MA 2000	1410	1491	1530	32	13	400	190



Accessories

Opposite facing fin type damper

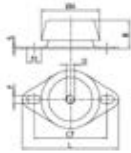


MOD.	a	b	a1	b1	a2	b2	n1p	n2p	n°	Φ	H (1)	H (2)	kg (1)	kg (2)
MA 400	322	229	366	273	402	309	1-125	2-125	10	12	220	250	11	12
MA 450	361	256	405	300	441	336	1-125	2-125	10	12	220	250	14	15
MA 500	404	288	448	332	484	368	2-125	3-125	14	12	220	250	18	19
MA 560	453	322	497	366	533	402	2-125	3-125	14	12	220	250	21	22
MA 630	507	361	551	405	587	441	2-125	3-125	14	12	220	250	24	25
MA 710	569	404	629	464	669	504	2-160	3-160	14	14	220	250	28	29
MA 800	638	453	698	513	738	553	2-160	3-160	14	14	220	250	32	33
MA 900	715	507	775	567	815	607	2-160	4-160	16	14	220	250	36	38
MA 1000	801	569	871	639	921	689	2-200	3-200	14	14	220	250	44	46
MA 1120	898	638	968	708	1018	758	3-200	4-200	18	14	220	250	50	52
MA 1250	1007	715	1077	785	1127	835	3-200	4-200	18	14	220	250	55	58
MA 1400	1130	801	1210	881	1270	941	3-200	5-200	20	18	220	250	81	84
MA 1600	1267	898	1347	978	1407	1038	4-200	6-200	24	18	220	250	92	96
MA 1800	1421	1007	1501	1087	1561	1147	4-200	6-200	24	18	220	250	105	110
MA 2000	1593	1130	1683	1220	1753	1290	5-200	7-200	28	22	220	250	140	145

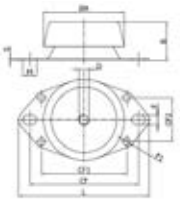
(1) Up to 300 mm H<sub>2</sub>O.  
(2) Above 300 mm H<sub>2</sub>O.

Shock-absorbers

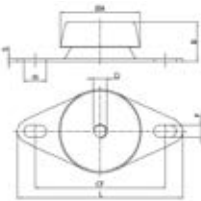
TYPE 1



TYPE 2

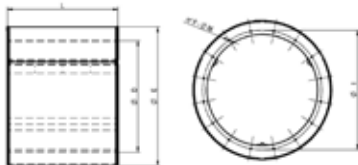


TYPE 3



MOD.	SHOCK-ABSORBERS MODEL	TYPE	øA	B	D	CF	CF1	CF2	F	øF1	L	M	S
MA-250	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-280	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-310	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-350	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-400	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-450	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-500	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-560	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-630	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-710	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
MA-800	CF 924512	2	92	44...45	12	120	98	50	10.5	8.5	130	15.5	2.5
MA-900	CF 924512	2	92	44...45	12	120	98	50	10.5	8.5	130	15.5	2.5
MA-1000	CF 924512	2	92	44...45	12	120	98	50	10.5	8.5	130	15.5	2.5
MA-1000	CF 924512	2	92	44...45	12	120	98	50	10.5	8.5	130	15.5	2.5
MA-1000	CF 924512	2	92	44...45	12	120	98	50	10.5	8.5	130	15.5	2.5
MA-1600	CF 1204516	3	92	45	26,5	149,5			14		190	16	3,5
MA-1800	CF 1204516	3	92	45	26,5	149,5			14		190	16	3,5
MA-2000	CF 1204516	3	92	45	26,5	149,5			14		190	16	3,5

Circular silencers



Silencers are used to lower the noise level at air conditioning or ventilation installation manufactured using galvanised steel

- Upon request: other constructions using different materials.

øD	øE	L	øI	F	øM
315	515	ØD,1,5ØD, 2ØD	355	8	M8
355	555	ØD,1,5ØD, 2ØD	395	8	M8
400	600	ØD,1,5ØD, 2ØD	450	8	M8
450	650	ØD,1,5ØD, 2ØD	500	8	M8
500	700	ØD,1,5ØD, 2ØD	560	12	M8
560	760	ØD,1,5ØD, 2ØD	620	12	M8
630	830	ØD,1,5ØD, 2ØD	690	12	M8
710	910	ØD,1,5ØD, 2ØD	770	16	M8
800	1000	ØD,1,5ØD, 2ØD	860	16	M8

øD	øE	L	øI	F	øM
900	1100	ØD,1,5ØD, 2ØD	970	16	M10
1000	1200	ØD,1,5ØD, 2ØD	1070	16	M10
1120	1320	ØD,1,5ØD, 2ØD	1190	20	M10
1250	1450	ØD,1,5ØD, 2ØD	1320	20	M10
1400	1600	ØD,1,5ØD, 2ØD	1470	20	M10
1500	1700	ØD,1,5ØD, 2ØD	1570	20	M10
1600	1800	ØD,1,5ØD, 2ØD	1680	24	M14
1700	1900	ØD,1,5ØD, 2ØD	1780	24	M14
1800	2000	ØD,1,5ØD, 2ØD	1880	24	M14