



Single inlet
centrifugal fans

model CMA - ATEX

APPLICATIONS

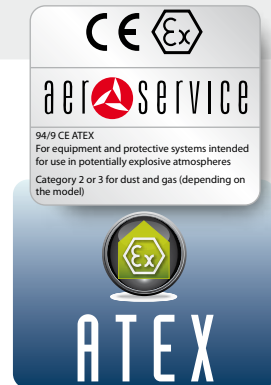
ATEX



CERTIFICATION "e": CE II 2 G. EEx e
CERTIFICATION "d": CE II 2 G. EEx d
CERTIFICATION BODY: L.O.M.
IDENTIFICATION NO.: LOM3ATEX0147



CMA/ATEX



TECHNICAL CHARACTERISTICS

| | | |
|----------------------------|--------------------------------|------------------------------|
| OPERATING RANGE | Airflow m³/h | from 440 to 3550 |
| | Pressure Pa | from 0 to 4100 |
| MIN. IMPELLER DIAM. | mm | 324 |
| MAX. IMPELLER DIAM. | mm | 545 |
| MOTOR | Volt [± 10%] | 230-400 T / 400-690 T |
| | Poles | 2 |
| | IP | 55 |
| MIN. FLUID TEMP. | °C | -20 |
| MAX. FLUID TEMP. | °C | +80 |

SPECIFICATION CONDITION

Single inlet centrifugal fan in die cast aluminium with impeller having die cast aluminium radial blades with static and dynamic balancing. Operating temperature from -20°C to +80°C., 400V/50 Hz asynchronous three-phase motor, IP55 protection rating, ATEX EEx e certified or flame-proof to EEx d. AERSERVICE CMA/ATEX type.

Single inlet centrifugal fans



CONSTRUCTION CHARACTERISTICS

FRAME

The structural frame is composed of a forged aluminium element with a polyester resin coating baked-on at 190°C. The single intake centrifugal electric fan is designed to drive a turbine made of aluminium alloy so that it can be used in a potentially explosive atmosphere. The larger versions have an oversized scroll housing with more stiffening ribs to impart the necessary mechanical strength in relation to high pressure conditions.

IMPELLERS

The impeller, featuring curved open blades, is made of lightweight aluminium alloy and is mounted on a hub. The impeller is statically and dynamically balanced in compliance with UNI EN 1032.

MOTORS

The motors are manufactured in Italy and feature IP 55 protection with insulation class F; the motors are directly coupled to the impeller, ATEX certified and explosion proof to EEx e or flameproof to EEx d. Depending on the model, three-phase motors are connected to a 230/400 supply (for power ratings up to 4 kW) or 400/690 (for power ratings above 4 kW).



CMA - ATEX

View of the different rotation positions



AERSERVICE SUPPLIES PRODUCTS AND SOLUTIONS TAKING ACCOUNT OF NATIONAL AND INTERNATIONAL NORMATIVE REFERENCES

| | |
|----------------------------|--|
| UNI EN 1032:1998 | Mechanical vibration - Examination of mobile machines in order to establish the magnitude of vibration transmitted to the whole body - General |
| 2006/42 EC | Machine safety directive and subsequent amendments |
| 2004/108/EC | EC Electromagnetic Compatibility |
| 2006/95 EC | Low Voltage |
| D.L. 81/2008 | Improvement of the safety and health of workers in the workplace |
| UNI EN 12101-3:2004 | Smoke and heat control systems - Specification for powered smoke and heat exhaust ventilators |
| 94/9/EC ATEX | For equipment and protective systems designed for use in potentially explosive atmospheres |
| UNI EN 13779:2008 | Ventilation for non-residential buildings. Performance requirements for ventilation and room-conditioning systems |
| UNE 100165:2004 | Climate control. Smoke extraction and ventilation in kitchens |
| UNI EN 13141-9 | Ventilation for buildings - Performance testing of components/products for residential ventilation |
| UNI EN 15251:2008 | Ventilation for buildings - Fire prevention measures for building air distribution systems |



CMA - ATEX

Single inlet centrifugal fans

TECHNICAL CHARACTERISTICS

| Model | Speed (RPM) | Power (KW) | Maximum airflow (m³/h) | Sound pressure level dB(A) | Weight with motor (Kg) | |
|---------------------|----------------|---------------|------------------------------|-------------------------------------|------------------------------|-------|
| | | | | | EEx-e | EEx-d |
| CMA-324-2T/ATEX | 2850 | 0,18 | 440 | 70 | 10 | 16 |
| CMA-325-2T/ATEX | 2780 | 0,25 | 600 | 73 | 12 | 19 |
| CMA-426-2T/ATEX | 2765 | 0,37 | 850 | 75 | 14 | 24 |
| CMA-527-2T/ATEX | 2800 | 0,55 | 1000 | 80 | 17 | 25 |
| CMA-528-2T-1/ATEX | 2780 | 0,75 | 1250 | 82 | 24 | 36 |
| CMA-528-2T-1,5/ATEX | 2850 | 1,10 | 1750 | 83 | 27 | 40 |
| CMA-531-2T-1,5/ATEX | 2880 | 1,10 | 1790 | 84 | 30 | 43 |
| CMA-531-2T-2/ATEX | 2850 | 1,50 | 2000 | 85 | 31 | 50 |
| CMA-540-2T/ATEX | 2890 | 1,50 | 2600 | 85 | 38 | 57 |
| CMA-545-2T-3/ATEX | 2840 | 2,20 | 2630 | 86 | 54 | 75 |
| CMA-545-2T-4/ATEX | 2880 | 3,00 | 3550 | 88 | 63 | 87 |

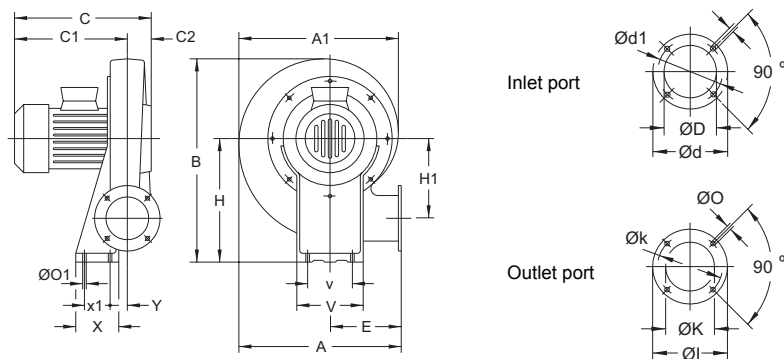
ACOUSTIC CHARACTERISTICS

Sound power spectrum Lw(A) in dB(A) versus frequency band in Hz

| Model | Lp dB(A) | | | | | | | | Model | Lp dB(A) | | | | | | | | | |
|---------------------|----------|-----|-----|-----|------|------|------|------|-------|---------------------|-----|-----|-----|------|------|------|------|----|----|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| CMA-324-2T/ATEX | 70 | 36 | 50 | 68 | 74 | 78 | 75 | 70 | 61 | CMA-531-2T-1,5/ATEX | 84 | 50 | 64 | 82 | 88 | 92 | 89 | 84 | 75 |
| CMA-325-2T/ATEX | 73 | 39 | 53 | 71 | 77 | 81 | 78 | 73 | 64 | CMA-531-2T-2/ATEX | 85 | 51 | 65 | 83 | 89 | 93 | 90 | 85 | 76 |
| CMA-426-2T/ATEX | 75 | 41 | 55 | 73 | 79 | 83 | 80 | 75 | 66 | CMA-540-2T/ATEX | 85 | 54 | 67 | 85 | 91 | 96 | 92 | 87 | 79 |
| CMA-527-2T/ATEX | 80 | 46 | 60 | 78 | 84 | 88 | 85 | 80 | 71 | CMA-545-2T-3/ATEX | 86 | 55 | 68 | 86 | 92 | 97 | 93 | 88 | 80 |
| CMA-528-2T-1/ATEX | 82 | 48 | 62 | 80 | 86 | 90 | 87 | 82 | 73 | CMA-545-2T-4/ATEX | 88 | 57 | 70 | 88 | 94 | 99 | 95 | 90 | 82 |
| CMA-528-2T-1,5/ATEX | 83 | 49 | 63 | 81 | 87 | 91 | 88 | 83 | 74 | | | | | | | | | | |

The indicated values show, by means of sound pressure and sound power level (dB(A)) measurements taken in free field conditions at a distance equivalent to twice the size of the fan plus the impeller diameter, from a minimum of 1.5 m.

DIMENSIONS (mm)

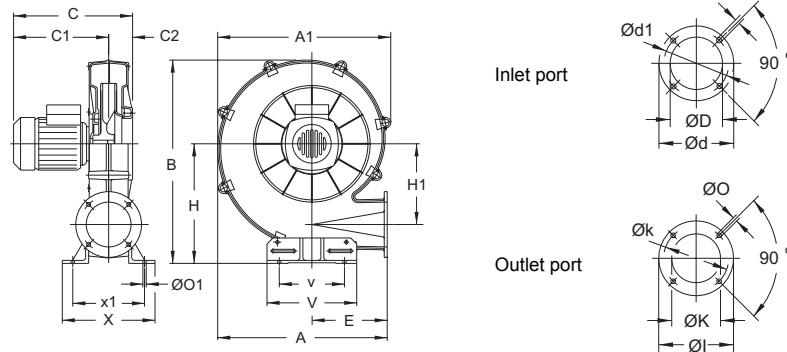


| Model | EEx-"e" | | | | EEx-"d" | | | | | | | | | | | | | | | | | | | | |
|---------------------|---------|-----|-----|-----|---------|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|----|
| | A | A1 | B | C | C1 | C | C1 | C2 | ØD | Ød | Ød1 | Ød2 | E | H | H1 | Øl | ØK | Øk | Ø | Ø1 | V | v | X | x1 | Y |
| CMA-324-2T/ATEX | 311 | 302 | 356 | 263 | 225 | 288 | 250 | 38 | 80 | 130 | 112 | M.5 | 145 | 205 | 145 | 108 | 62 | 90 | 7 | 9 | 173 | 125 | 90 | 60 | 20 |
| CMA-325-2T/ATEX | 335 | 328 | 399 | 266 | 226 | 291 | 251 | 40 | 94 | 140 | 122 | M.6 | 155 | 235 | 152 | 120 | 80 | 102 | 7 | 9 | 180 | 145 | 110 | 80 | 20 |
| CMA-426-2T/ATEX | 354 | 344 | 412 | 293 | 253 | 316 | 276 | 40 | 117 | 155 | 132 | M.6 | 162 | 240 | 163 | 140 | 90 | 119 | 7 | 13 | 210 | 160 | 105 | 65 | 26 |
| CMA-527-2T/ATEX | 371 | 361 | 440 | 297 | 255 | 320 | 280 | 42 | 125 | 170 | 147 | M.6 | 168 | 260 | 170 | 155 | 100 | 129 | 7 | 13 | 220 | 170 | 120 | 80 | 20 |
| CMA-528-2T-1/ATEX | 401 | 395 | 488 | 340 | 292 | 342 | 294 | 48 | 116 | 190 | 162 | M.6 | 178 | 290 | 177 | 190 | 130 | 160 | 11 | 13 | 230 | 180 | 140 | 100 | 20 |
| CMA-528-2T-1.5/ATEX | 401 | 395 | 488 | 339 | 291 | 337 | 289 | 48 | 135 | 190 | 162 | M.6 | 178 | 290 | 177 | 190 | 130 | 160 | 11 | 13 | 230 | 180 | 140 | 100 | 20 |
| CMA-531-2T-1.5/ATEX | 440 | 434 | 537 | 340 | 292 | 342 | 294 | 50 | 160 | 215 | 180 | M.6 | 193 | 320 | 200 | 200 | 140 | 175 | 11 | 13 | 240 | 190 | 160 | 120 | 21 |
| CMA-531-2T-2/ATEX | 440 | 434 | 537 | 338 | 288 | 392 | 342 | 50 | 160 | 215 | 180 | M.6 | 193 | 320 | 200 | 200 | 140 | 175 | 11 | 13 | 240 | 190 | 160 | 120 | 21 |

Single inlet centrifugal fans

CMA - ATEX

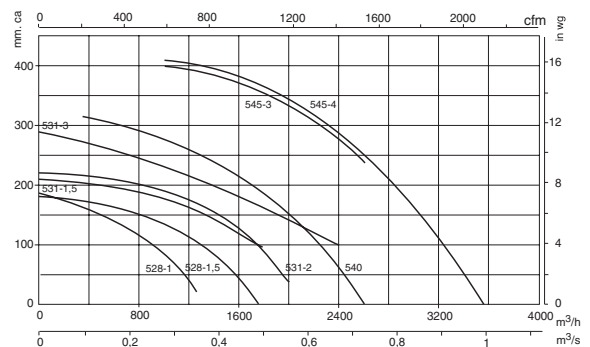
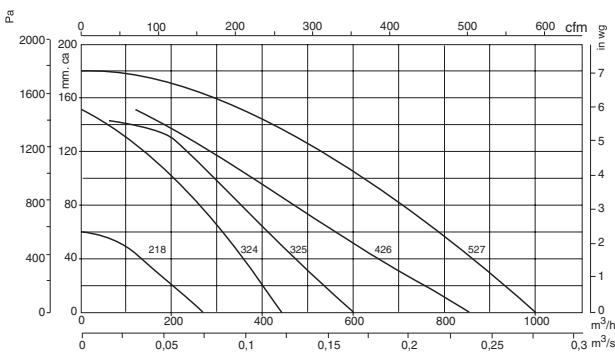
DIMENSIONS (mm)



| Model | EEEx-"e" | | | | EEEx-"d" | | | | | | | | | | | | | | | | | | | | |
|-------------------|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|---|
| | A | A1 | B | C | C1 | C2 | ØD | Ød | Ød1 | Ød2 | E | H | H1 | ØI | ØK | Øk | Ø | Ø1 | V | v | X | x1 | Y | | |
| CMA-540-2T/ATEX | 567 | 580 | 680 | 365 | 285 | 419 | 339 | 80 | 170 | 240 | 205 | M.10 | 252 | 400 | 270 | 220 | 150 | 190 | 13 | 11 | 300 | 218 | 310 | 240 | - |
| CMA-545-2T-3/ATEX | 651 | 646 | 776 | 438 | 323 | 467 | 352 | 115 | 180 | 255 | 220 | M.10 | 290 | 450 | 309 | 250 | 175 | 220 | 13 | 13 | 360 | 240 | 391 | 291 | - |
| CMA-545-2T-4/ATEX | 651 | 646 | 776 | 461 | 346 | 511 | 396 | 115 | 180 | 255 | 220 | M.10 | 290 | 450 | 309 | 250 | 175 | 220 | 13 | 13 | 360 | 240 | 391 | 291 | - |

OPERATING CURVES

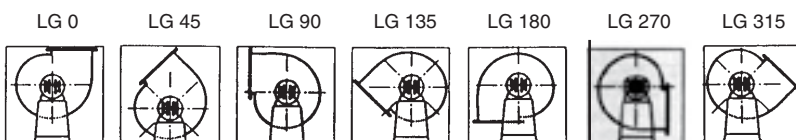
Q = airflow in m³/h and m³/s Pa = static pressure in mmH₂O and Pa



ORIENTATION

Standard model with rotation position LG 270

Optional model with rotation position LG 180 or alternative positions



ACCESSORIES



KEY

- INT** ON/OFF switch
- AR** Soft starter for three-phase motors
- RPA** Protective grill for centrifugal fan inlet
- B** Coupling flange for centrifugal fan
- ACE** Antivibration coupling for centrifugal fan
- REG** Manual adjuster damper