# MANDIK

# CEILING FAN STRATIFIER





These technical specifications define the design and performance ranges of the ceiling fan STRATIFIER. It is valid for production, designing, ordering, delivery, assembly and operation.

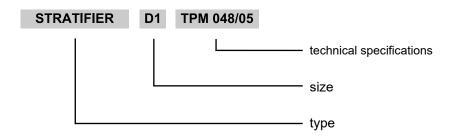
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# II. ORDERING INFORMATION

# 1. Ordering key





#### III. GENERAL INFORMATION

#### 2 Description

**2.1.** Ceiling fans are used to increase efficiency of heating in industrial halls, especially in combination with hot-air heating.

Ceiling fans provide forced flow of heated air air downwardly (into the stay of persons area). It reduce thermal gradient between the upper and lower areas of the hall.

#### 2.2. Working conditions

Ceiling fans are designed for macroclimatic areas with mild climate according to EN 60 721-3-3 and for indoor use.

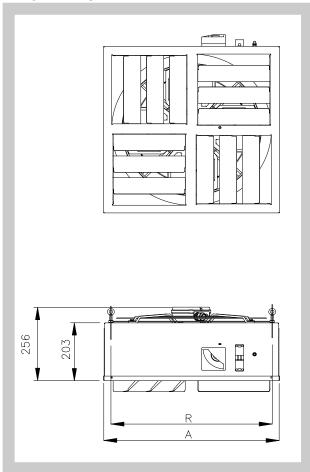
#### 3. Design

3.1. Ceiling fans are available in three perfomance ranges equipped with thermostat.

#### 4. Dimensions and weights

### **4.1.** Dimensions and weights of ceiling fans

Fig. 1 Ceiling fans dimensions



Tab. 3.1.1. Dimensions and weights of ceiling fans

Ceiling fan type	D1	D2	D3
Dimension A	582	582	812
Dimension R	490	535	750
Weight [Kg]	17,3	21,1	36,1

#### 5. Function

**5.1.** Ceiling fans turn on automatically when the requested temperature is reached (0-30 °C).



#### IV. SPECIFICATIONS

#### 9. Technical parameters

#### 6.1. Basic data

Tab. 6.1.1. Basic data

Ceiling fan type	D1	D2	D3
Air flow volume by 20°C [m³.h-¹]	4300	5700	9100
Electric input [W]	260	480	520
Current [A]	1,15	2,1	2,4
Summary air flow rate [m³.h⁻¹]	8000	10600	17000
Fan speed [rpm]	1380	1390	950
Sound pressure level* [dB(A)]	55	55	51
Electrical connection	230 V / 50 Hz		
Fusing	6 A		
Degree of protection	IP 20		

 $<sup>^{\</sup>star}$  value at distance 7m for D1, 10m for D2, 13m for D3 from the unit in free field .

#### **6.2.** Recommended installation height

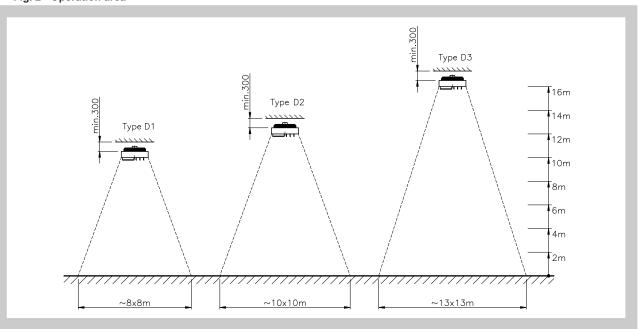
Tab. 6.2.1. Recommended installation height

Ceiling fan type	D1	D2	D3
Maximum of installation height [m]	10	12	16
Minimum of installation height [m]	4	8	10

The requirement for placement at other height has to be consulted with the manufacturer.

#### **6.3.** Operation area

Fig. 2 Operation area



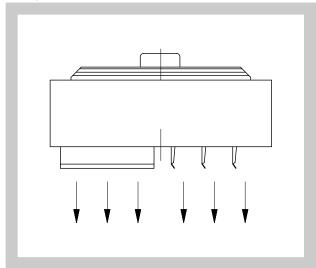
Values are valid by vertical set up of blades.

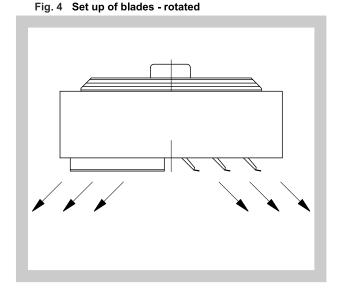


#### 6.4. Set up of blades

Operation area could be enlarged by blade direction (suitable for installation with low height).

Fig. 3 Set up of blades - vertical





#### V. MATERIALS, FINISHING

#### 7. Material

**7.1.** Ceiling fan casing is made of galvanized sheet powder coated RAL 7032. Blades are coated RAL 7016.

#### VI. PRODUCT INFORMATION

#### 8. Product data label

**8.1.** The product data label is located on the side of the casing.

Mandík a.s.
267 24 Hostomice

CEILING FAN, TYPE

VOLTAGE:

AIR VOLUME:

COUNTRY OF DESTINATION:

SERIAL No.:

Mandík a.s.
267 24 Hostomice

Dobříšská 550
Czech republic

Lip Code:

Weight:

Weight:

#### VII. INSPECTION, TESTING

#### 9. Inspection

**9.1.** The equipment is inspected by the manufacturer, its operation is dependent on the correct installation. All devices are tested in terms of safety and operability after production.



#### VIII. PACKING, TRANSPORT, STORAGE

#### 10. Logistical data

- **10.1.** The ceiling fans are packed into the packing material. The are transported by freight cabinet vehicles. Ceiling fans has to be protected against mechanic damages when transported and manipulated. There must not occur any sharp shocks and ambient temperature must not exceed +50°C.
- **10.2.** If not otherwise agreed, the handover is considered when the goods is forwarded to the carrier.
- **10.3.** The ceiling fans has to be stored in the indoor environment without any aggressive vapours, gases or dust. Indoor temperature has to be in the range from -5 °C to +40 °C and maximum relative humidity 80%. Units must be protected against mechanic damages when transported and manipulated.
- **10.4.** The delivery includes ceiling fan, the certificate of quality and completeness with stamp checks and the instructions for installation, operation and maintenance.

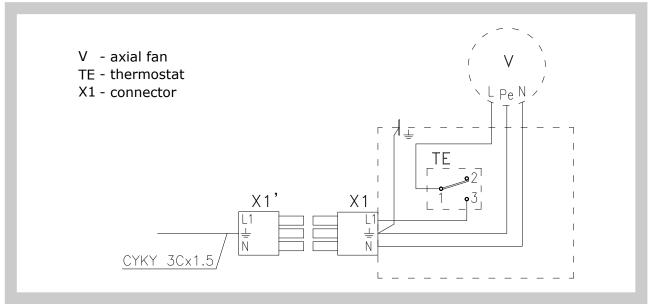
#### IX. ASSEMBLY. MANIPULATION. MAINTENANCE AND REVISIONS

#### 11. Assembly

- **12.1.** The installation of electrical connection must be done by authorised person only according EN ISO/IEC 17020.
- 12.2. Ceiling fans are installed under hall ceiling. Suspensions points are ensured by four M8 screws. Ceiling fan could be suspended by help of chains. There is possible use wall consoles. Chains and consoles are not included in delivery of ceiling fan. Ceiling fans are intend for halls with minimum height 4 m.
- **12.3.** The ceiling fan has to be connected according to applicable standards..

  They are electric appliances class I according to EN 61140. They are provided with clamp for connection of the protective wire. This clamp must be connected according to the above above mentioned standard.
- **12.4.** Putting in the operation has to be done by authorised person only.

Fig. 6 Wiring diagram





#### 13. Operation

- **13.1.** Ceiling fan operation could be done by instructed and authorized person.
- 14. Maintenance and inspection
  - **14.1.** Maintenance requirements of ceiling fan are minimal. If not otherwise required by local regulations, service check have to be performed at least every three years. However, the producer recommends service check every year.

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