

## AGB | Technical Terms of Delivery | Business Unit Fans

These General Terms and Conditions specify the basic rules for proper use of mdexx fans, welded assemblies and their combination as a system. If necessary, they are supplemented by the information in the operating instructions.

The conditions are as follows:

Contractor = AN | Client = AG

- All safety-relevant remarks, as well as maintenance and repair instructions, are to be taken from the operating instructions. Without this knowledge and consideration of the safety instructions, the products must not be put into operation.
- Factory settings or the use of original parts may not be changed without the prior written consent of the AN. Furthermore, auxiliary and operating materials deviating from the assembly and operating instructions are not permitted. The technical operating conditions defined in the order description or technical project specification, e.g. the specified voltage supply, the installation height, the climatic conditions, specified speed ranges, etc., may not be deviated from.
- No liability is accepted for faults resulting from improper commissioning by the AN.
- Safety devices must not be modified, bypassed or switched off. Unless otherwise agreed, the proper operation and condition of the product shall be inspected quarterly. For additional information, please refer to the contractually agreed specification or the operating instructions.
- Use contrary to the intended purpose, as well as deviations from the above requirements and unauthorized measures, will result in the expiration of the operating permit. If the product is nevertheless put into operation, neither claims for defects or liability nor other consequential costs can be asserted.
- Separating or non-separating protective devices must be provided in accordance with EN ISO 13857, EN 349, EN ISO 14120 and EN ISO 12499 in the case of partly completed machinery.
- All tolerances, methods for conversion and presentation of technical data of our fans are based on ISO 13348
- The electrical installation, including electrical protective devices, shall meet the requirements specified in EN 60204-1.
- Agreed vibration values according to ISO 14694 shall be documented prior to logistic dispatch and are guaranteed up to the point in time according to agreed delivery conditions (Incoterms). The AN cannot be held responsible for negligent subsequent changes of the vibration limits due to e.g. transport damage or assembly errors.
- System resonances and heterodynes of individual resonances in fixed-speed and speed-controlled operation must be excluded. These additional forces (e.g. due to vibrations, imbalances, etc.) can lead to material fatigue of the rotating and static components, to increased wear in the motor bearings, the rotating elements and the machine frame up to the foundations of the immediate environment. In the case of permanent and impermissibly high force effects, health hazards can also occur.
- Because increased vibration values could be due to the overall system of the plant and the AN delivers an incomplete machine, the AG must take into account the responsibility of the system balancing.
- If a product no longer provides its previously normal operating characteristics, e.g. pressure or volume flow characteristics, or if loud humming or vibrating is noticeable, the reasons for this can be very varied and must be urgently investigated by a specialist. Possible causes for increased vibration values could be rooted in the overall system of the plant.
- The AG must ensure that the individual components are properly and regularly inspected, maintained and cleaned, as irregular deposits could lead to imbalances and thus to bearing damage or vibrations. If vibrations are the cause, the AG must decide together with the AN whether the fan should be replaced as a preventive measure.
- The mass and stiffness of the overall system of the plant, in which the AN's products are installed, influence the vibration level and behavior of each individual component. According to ISO 14694, the manufacturer of rotating products is not responsible for the vibration behavior in the overall system if the rotating assembly complies with the vibration limits

according to ISO 14694. If no separate agreement is made between the AG and the AN, the vibration category BV-3 of ISO 14694 applies to flexible connection.

- The vibration level is expected to increase over time due to wear and other accumulated effects during operation. According to the above-mentioned ISO 14694, an increase in vibration levels is reasonable and safe for the AN's product range of standard fans as long as the alarm level of 11.8 mm/s for flexibly fixed fans and 7.1 mm/s for a rigid connection is not reached. Above this threshold, the entire system should be immediately disabled and an immediate investigation of the CO should be initiated. For fans with separate Technical Specifications, the threshold values are determined individually by contract, because certain applications require higher accuracy and smoothness of the fan unit.
- The inflow and outflow of air are of central importance for trouble-free operation. The system builder or the operator must ensure inflows free of stall so that dynamic pumping effects, vibrations or other physical disturbance effects are avoided and the CO's product can operate at its duty point.
- The product represents an incomplete machine in the sense of the Machinery Directive. Basic functional, safety and health protection requirements cannot yet be met in full, as certain risks only arise from the fact that the machine is still incomplete. The AG assumes the obligation to produce the industry and application-specific functional safety and to prove the compliance of the fan with the provisions of Directive 2006/42/EC.
- The services shall be deemed rendered after delivery of the manufactured components. Separate AG acceptance of the end product at the AN's premises shall only take place if the AN has been commissioned to do so in advance.
- So that by storage for periods > 2 years in case of favorable storage conditions (i.e. storage in dry, dust- and vibrationfree rooms) or more than 6 months in case of unfavorable conditions, a regular commissioning (at least 30 minutes every 6 months) is to be carried out. Otherwise, the motor bearings should be replaced before commissioning to prevent further damage. For longer storage of 6 months or more, the product must be stored in the installation position. Please refer to the fan specific data.
- If the AG makes further additions or changes to the scope of services or the specification during the project development, the AN must be informed immediately in order to check the consequences for the costs, feasibility, delivery date and other technical and commercial influences. As long as the examination has not been completed, the AN reserves the right to charge the additional costs resulting from the change and to adjust the delivery date to the new situation.
- Deviations of the delivery item from offers, samples, trial and pre-deliveries are permissible in accordance with the respectively valid DIN standards, other relevant technical standards and within tolerances customary in the industry.
- If, in the event of installation or attachment of the goods, the AG fails to examine the properties of the goods relevant to the intended use at least on a random basis prior to installation or attachment (e.g. by means of functional tests or a trial installation), this shall constitute in relation to us a particularly serious disregard of the care required in the course of trade (gross negligence). In this case, the AG's warranty rights with regard to these properties shall only come into consideration if the defect in question has been fraudulently concealed or a guarantee for the quality of the item has been assumed.
- Tabular documentation templates, report or protocol formats deviating from the CO are not part of the scope of delivery and will be agreed and offered separately upon request.
- Technical documents shall be checked for completeness upon delivery of the product. If no feedback is received from the AG, the contractually agreed scope of delivery shall be deemed to have been completely fulfilled 14 days after delivery.
- Technical documentation is available on the website or on request from the AN. Missing documents are to be requested from the AN without delay.
- With the concept and drawing acceptance, the AG declares to the AN the interface conformity with the specification, both geometrically with all connection dimensions, as well as all energy forms, such as voltage, motor power, or as far as known, the sound power data and vibration velocities.
- With the product acceptance, the AN declares to the AG that the services and deliveries have been performed in accordance with the contract. The warranty period begins with the acceptance.