



DUST COLLECTION  
& SOURCE CAPTURE

Owner's manual for installation,  
use and maintenance



**MAXIDRIVE™**

---

This manual is property of the owner. Leave with the unit when set-up and start-up are complete.  
AQC Dust Collecting Systems inc. reserves the right to change design and specifications without prior notice.

**INDEX**

<b>1</b>	<b>Introduction</b> .....	<b>3</b>
<b>2</b>	<b>Information on the MAXIDRIVE backward inclined direct drive fans.</b> . . .	<b>3</b>
<b>3</b>	<b>Presentation</b> .....	<b>4</b>
3.1	Each MAXIDRIVE fan includes .....	4
<b>4</b>	<b>Model numbers</b> .....	<b>4</b>
4.1	Amperage draw .....	5
<b>5</b>	<b>Fan dimensions.</b> .....	<b>5</b>
5.1	Available fan support brackets .....	6
<b>6</b>	<b>Normal usage</b> .....	<b>6</b>
<b>7</b>	<b>Operation and purpose</b> .....	<b>6</b>
<b>8</b>	<b>Components</b> .....	<b>6</b>
<b>9</b>	<b>Installation</b> .....	<b>7</b>
9.1	Inspection of goods .....	7
9.2	Location. ....	7
9.3	Installation of MAXIDRIVE fan with MAXAIR fume arm: .....	7
9.4	Installation of MAXIDRIVE fan with MAXIREACH extension boom: .....	8
9.5	Installation of MAXIDRIVE fan with MAXIREEL exhaust hose reel: .....	8
<b>10</b>	<b>Electrical connections.</b> .....	<b>9</b>
<b>11</b>	<b>Maintenance and inspection</b> .....	<b>9</b>
<b>12</b>	<b>Troubleshooting</b> .....	<b>10</b>
<b>13</b>	<b>Warranty.</b> .....	<b>11</b>
<b>14</b>	<b>Limitation of liability</b> .....	<b>12</b>
<b>15</b>	<b>Applicability</b> .....	<b>12</b>
<b>16</b>	<b>Governing law.</b> .....	<b>12</b>

# 1 INTRODUCTION

This present manual refers to the MAXIDRIVE backward inclined use direct drive exhaust blower. It includes important information concerning the installation, use and start-up of your unit. Read this manual thoroughly and apply the directives and procedures. Staff and personnel using the system will have to trained on safety measures and maintenance instructions.



**WARNING!**

The use of the exhaust blower will require proper installation and handling. Contact A.Q.C. Inc. if you have any doubts in regard to the use of your exhaust blower.

**Not following directives and procedures could cause injuries or property damages.**

# 2 INFORMATION ON THE MAXIDRIVE BACKWARD INCLINED DIRECT DRIVE BLOWER

Model: \_\_\_\_\_ Serial number: \_\_\_\_\_

Delivery date: \_\_\_\_\_ Date of installation: \_\_\_\_\_

Name of customer: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Accessories: \_\_\_\_\_

Other: \_\_\_\_\_

### 3 PRESENTATION

The MAXIDRIVE backward inclined direct drive blower is a system designed to exhaust and capture fumes, smoke or any gaseous being produced.

Main applications include welding, buffing, pharmaceutical operations, handling of volatile and harmful vapours, etc.

Optional equipment may include MAXAIR fume arms, MAXIREEL exhaust hose reels, MAXIDROP hose drop systems, etc.

#### 3.1 Each Maxidrive fan includes:

- 11 and 14 gauge powder coat painted steel housing
- Spark proof aluminum backward inclined impeller (optional steel impeller)
- Inlet screen
- Direct drive motor
- Duct companion flange or support bracket flange
- Inlet cone

### 4 MODEL NUMBERS

Voltage / HP	1 HP (6")	2 HP (8")	3 HP (10")	5 HP (12")
1 phase 115/208-230	MS-DF-01A-112	MS-DF-02A-112	MS-DF-03A-112	N/A
1 phase 115/208-230	MS-DF-01A-324	MS-DF-02A-324	MS-DF-03A-324	MS-DF-05A-324
1 phase 115/208-230	MS-DF-01A-35	MS-DF-02A-35	MS-DF-03A-35	MS-DF-05A-35

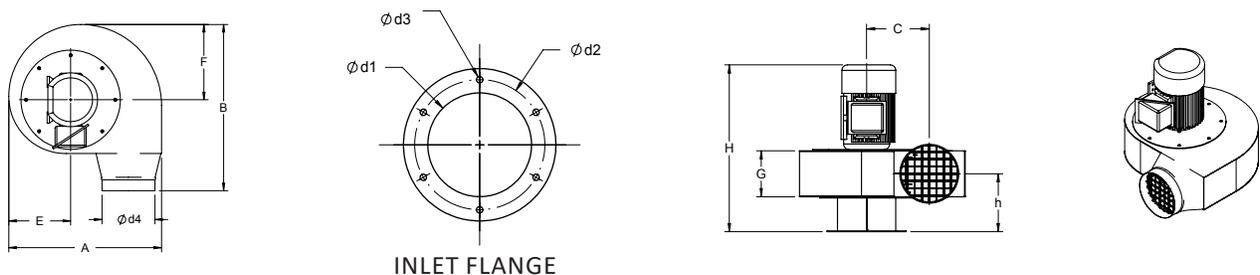
### 4.1 Amperage draw

Models	Voltage	Amperage	Models	Voltage	Amperage
DF-01	115-1-60	12	DF-03	115-1-60	N/A
	230-1-60	6.5		230-1-60	17
	208-3-60	3.1		208-3-60	9.6
	460-3-60	1.6		460-3-60	4.8
	575-3-60	1.4		575-3-60	3.9
DF-02	115-1-60	24	DF-05	115-1-60	N/A
	230-1-60	12		230-1-60	28
	208-3-60	6.8		208-3-60	15.2
	460-3-60	3.4		460-3-60	7.6
	575-3-60	2.7		575-3-60	6.1

## 5 FAN DIMENSIONS

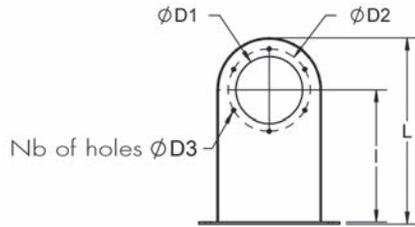
Voltage / HP	1 HP (6")	2 HP (8")	3 HP (10")	5 HP (12")
1 phase 115/208-230	MS-DF-01A-112	MS-DF-02A-112	MS-DF-03A-112	N/A
1 phase 115/208-230	MS-DF-01A-324	MS-DF-02A-324	MS-DF-03A-324	MS-DF-05A-324
1 phase 115/208-230	MS-DF-01A-35	MS-DF-02A-35	MS-DF-03A-35	MS-DF-05A-35

Figure 2

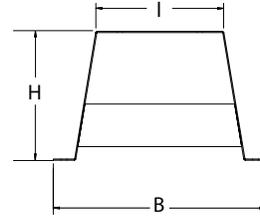


### 5.1 Available fan support brackets

**Figure 1**



**WALL MOUNT BRACKET**  
(VERTICAL OR HORIZONTAL INSTALLATION)



**ROOF TOP MOUNT BRACKET**  
(HORIZONTAL INSTALLATION ONLY)

## 6 NORMAL USE

The MAXIDRIVE backward inclined blower is designed to remove gases and smoke from the air resulting from a fabrication process. Each MAXIDRIVE backward inclined fans is built as per the criteria and information supplied by the customer for a specific application, and should not serve any other application without the approval of A.Q.C. Inc.

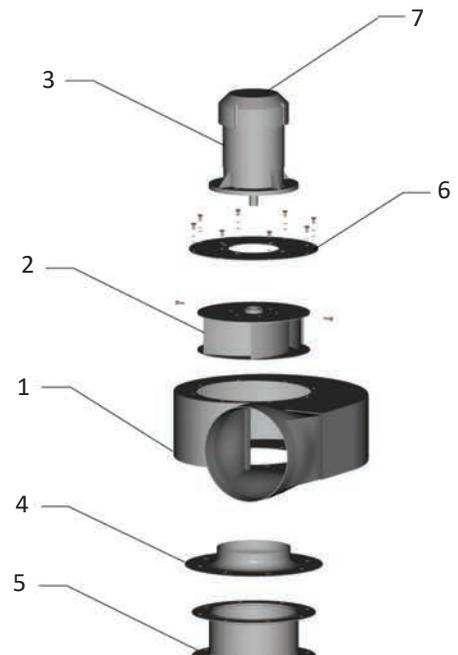
## 7 OPERATION AND PURPOSE

MAXIDRIVE backward inclined blade fans include impellers which are used to exhaust contaminated air directly to the outside or through a filtering device. Operating temperatures are 200°F (93°C). Optional high temperature resistant paint on impellers is available. Explosion proof motors are recommended when fan is installed in reactive gas environments.

## 8 COMPONENTS

1. Housing
2. Impeller
3. Motor
4. Inlet cone
5. Companion flange (straight pipe or bolted)
6. Motor support plate
7. Motor cooling impeller

**Figure 3**



## 9 INSTALLATION

MAXIDRIVE backward inclined fans may be used in conjunction with fume arms, hose reels and extension swing booms. Refer to appropriate use and installation manuals.



### WARNING!

Installation of equipment must be performed as per local building laws and regulations. Structure must meet proper weight support of arm and equipment.

### 9.1 Inspection of goods

The MAXIDRIVE backward inclined fan may be shipped fully assembled or separate from the support bracket. Proceed with a visual inspection upon receiving the material and check for any apparent damage that may have happened during freight. Generally, shipment includes the fan and motor assembly, support bracket and motor cover (if ordered). Other optional components such as exhaust silencers, starters and vibration isolators may be included with shipment. Inspect box or crate appearance when receiving the goods. Report damages to carrier immediately. Failure to do so will void future claims.

### 9.2 Location

1. The area where the blower will be installed should be able to sustain the weight of such along with the accessories, ducting, fan or any optional equipment.
2. Installer should ensure area around the fan will be free of obstacles such as beams, lighting fixtures, overhead cranes, etc.
3. Confirm fan location (and optional equipment) with the engineer or user.
4. For safety purpose, a team of two (2) should be assigned to the installation.

### 9.3 Installation of MAXIDRIVE fan with MAXAIR fume arm:

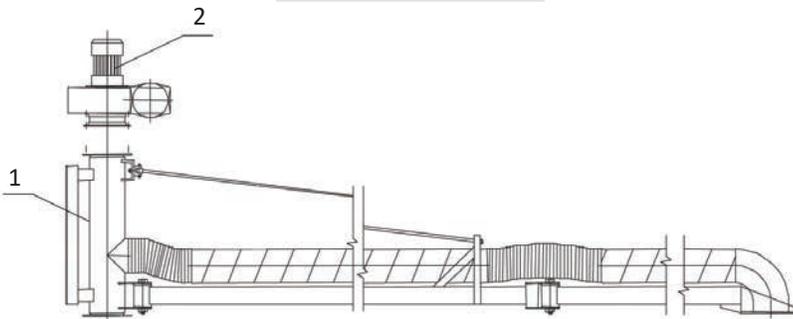
1. Bolt or weld support bracket (1) to support structure.
2. Position fan on support bracket. DO NOT FASTEN TO BRACKET YET. Ensure fan orientation is appropriate for exhaust direction. **Note:** Optional fan/arm reducer (4) will be required if arm outlet size does not match fan inlet size.
3. Attach fume arm to support bracket and MAXIDRIVE fan. Ensure arm socket stopper is facing bracket support structure. **Note:** Optional fan outlet silencer (5) will be installed if required.

**9.4 Installation of MAXIDRIVE fan with MAXIREACH extension boom:**

1. Bolt or weld MAXIREACH boom base (1) to support structure.
2. Position fan on boom base. Ensure fan orientation is appropriate for exhaust direction.

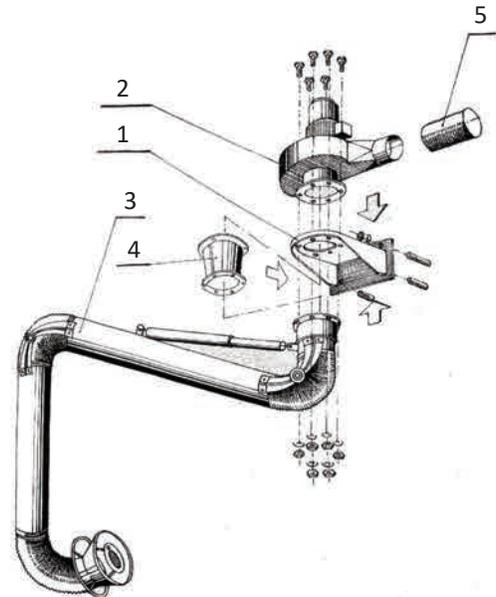
**Note:** Optional fan/boom base reducer will be required if boom outlet size does not match fan inlet size.

**Figure 5**



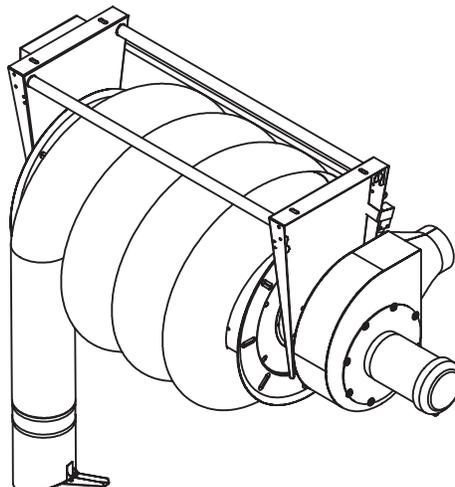
**Note:** Optional fan outlet silencer will be installed if required.

**Figure 4**



**9.5 Installation of MAXIDRIVE fan with MAXIREEL exhaust hose reel:**

**Note:** AQC usually supplies fan and reel factory assembled. If fan is shipped separate, bolt fan flanged inlet to hose reel flanged outlet. Ensure fan orientation is appropriate for exhaust direction.



## 10 ELECTRICAL CONNECTIONS

**Note:** Due to different voltages, amperages, HP and fan optional equipment available, wiring diagrams and electrical connections are available on request. On three phase motors, verify rotation on start-up, reverse wires if necessary.

## 11 MAINTENANCE AND INSPECTION

The chart indicated below shows different inspections and the frequency at which they should be performed.

Frequency of inspections	Components	Procedures
Daily	Fan impeller	Ensure fan does not make any grinding or unusual noises.
		Check for vibration.
Monthly	Cooling impeller	Ensure cooling impeller is not jammed.
Yearly	All components	Perform amperage draw reading.
		Remove air inlet connection and check status of impeller / wheel.
		Check all fasteners.

## 12 TROUBLESHOOTING

Problem	Probable cause	Solution
Low fan air volume	Fan rotation is incorrect.	Reverse motor polarity.
	Obstacle / debris in ductwork or fan impeller	Check if hose or inlet is plugged.
		Remove debris or obstacle.
The fan is vibrating	Unbalanced fan impeller. Worn or damaged bearings.	Balance the fan to Amca class G 6.3 or replace with a new one. Replace the bearings.
	Check for obstruction.	
	Loose bolts on motor plate or of whole fan attachment.	Tighten the bolts.
The fan makes noise	Loose or damaged motor bearings.	Replace the bearings.
	Debris jammed in impeller.	Remove debris, clean up and inspect for damage, balance or replace if needed.

## 13 WARRANTY

- 13.1 **Coverage:** Aireau Quality Control Inc. or its designated affiliate (the "Seller") selling the product (the "Product"), warrants that the Product sold by Seller will be free from defects in material and workmanship for a period of 12 months from the date of its installation or 14 months from the date of shipment by Seller, whichever date is earlier (the "Warranty Period").
- 13.2 **Exceptions:** This warranty does not apply to any Product or portion thereof that: (i) has been used in a manner not in compliance with Seller's or manufacturer's documentation and instructions, (ii) has had changes, alterations or repairs made by a person other than a person authorized by Seller, (iii) has been improperly installed or used or has been installed or used contrary to applicable codes, standards, laws and regulations, (iv) has been subjected to improper storage, accident, neglect, misuse or abuse, (v) has been damaged during shipping, (vi) has been subject to damages resulting from normal wear and tear, (vii) has not been used with appropriate fire protection systems or explosion venting when required or (viii) has not been installed by a licensed contractor with experience in fire and explosion hazards and applicable codes, laws and regulations. For greater certainty, this warranty does not apply to filters sold as part of, or for use with, the Product. Unless specifically accepted otherwise in writing by Seller, Seller does not warrant that electrical equipment will comply with any laws or regulations of the customer's jurisdiction.
- 13.3 **Claims:** To benefit from this warranty, customer must notify Seller in writing of the Product defect, which notice shall include a reasonable description of the defect, within 10 days from the date such defect is discovered or ought to have been discovered.
- 13.4 **Remedy:** During the Warranty Period and subject to the terms herein, Seller will, at its option, either: (i) repair or replace the Product or any defective parts or components (except for filters) with Product, parts or components (except filters) free from defect or (ii) credit or refund the purchase price of the Product. If Seller so requests, customer must return the defective Product to Seller's place of business determined by Seller. Shipping, installation, removal and re-installation costs will be solely borne by the customer. **The foregoing shall be customer's sole and exclusive remedy for any defect in the product, its parts and components and for any breach of the warranty herein.**
- 13.5 **Disclaimer:** Except as set forth in this section 1, each of seller, its affiliates and their directors, officers, subcontractors and representatives (the "seller parties") disclaims all representations and warranties, whether written, oral, express, implied, statutory, or otherwise, including all implied warranties of merchantability, quality, fitness for a particular purpose, non-infringement, and warranties arising from a course of dealing, course of performance, usage, or trade practice and customer hereby expressly waives any right related thereto. Without limitation to the foregoing and except as expressly set out herein, the seller parties do not represent or warrant that: (a) the use of the product will be timely, uninterrupted or operate in combination with any other hardware, software, system or data or (b) the product will meet customer's intended use, requirements or expectations.

## 14 LIMITATION OF LIABILITY

- 14.1 **Limitation of Liability:** Notwithstanding anything to the contrary, in no event will the seller parties' liability arising out of, or related to, the product or its parts and components, whether pursuant to contractual or extracontractual liability, tort or under any other theory of liability, exceed the price paid to seller for the product giving rise to such liability.
- 14.2 **Exclusion of Consequential and Similar Damages:** Notwithstanding anything to the contrary, in no event will the seller parties be liable for any indirect, punitive, special, exemplary, incidental, consequential or other similar damages of any type or kind (including loss of revenue, profits, use or other economic advantage, damages due to product failure, work stoppage or delays in delivery) arising out of, or in any way connected to, the product or its use, breach of contract, tort (including negligence), strict liability, product liability, or otherwise, regardless of cause, even if the seller parties had previously been advised of the possibility of such damages or could have reasonably foreseen them.
- 14.3 **Fire and Explosion and Acceptance of Risk:** Customer acknowledges that improper installation or use of the Product may result in fire or explosion. To minimize such risks, proper installation, operation, and maintenance of the Product in accordance with all applicable codes, standards, laws and regulations is critical. Prior to installation and use, customer shall ensure that the Product meets the applicable codes, laws and regulations, including those related to the addition of appropriate fire protection systems or explosion venting. Installation shall be performed by a licensed contractor with experience in fire and explosion and applicable codes, laws and regulations.

## 15 APPLICABILITY

- 15.1 The terms herein constitute the only warranty given by Seller with respect to the Product. No other terms and conditions, whether included on a purchase order or in any other document, shall apply or bind the Seller with respect to the Product warranty and all such terms and conditions and documents are expressly disclaimed.

## 16 GOVERNING LAW

- 16.1 These warranty terms will be governed by and construed under the laws in force in the Province of Ontario, Canada, excluding its conflict of law rules.