VAC-AIR INDUSTRIES

User Guide

Model BAK-PC

CE

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Menomonee Falls WI, 53051
(414)353-5270 | vacairind.com

Introduction

Important!
Please read these operating and safety instructions carefully before using this equipment.

Your safety is our priority. If you are uncertain about how to operate this equipment, do not proceed without assistance. For technical support or questions, please contact Vac-Air Industries.
Contact information, including our phone number, can be found on the Vac-Air Industries website.

www.vacairinc.com

Congratulations on Your Purchase!
Thank you for choosing Vac-Air Industries. With proper installation, use, and maintenance, your new tool is designed to deliver years of reliable, trouble-free, and industry-leading performance.
Important Installation Information:

- If your purchase included a filter/regulator/lubricator and tool balancer, please refer to the relevant installation instructions provided in this manual.
- If you purchased the tool only, you may skip the installation instructions for the regulator, lubricator, and tool balancer. Please proceed directly to the Tool Installation section.

Description

The BAK-PC is perfectly sized to meet your poultry processing needs. It's stronger than the BAK-H and BAK-S, yet lighter and more agile than the TK. This durable and reliable cutter is ideal for processing small to medium sized birds.
Advantages

- High Speed Controlled Cutting Cycle
- No Overhead Valve System
- Corrosion resistant materials
- Air Trigger Operated
- Designed for chickens, capons, ducks, geese, small turkeys and quail
- USDA Approved
- U.S. Patent: 3,816,874, 3,893,237

Specifications

- Maximum Operating Air Pressure: 100 Psi
- Capacity: 2,000 cycles per hour
- Blade Length: 3-1/4"
- Blade Opening: 2-1/2"
- Length: 12", Width: 5", Height: 10"
- Weight: 5lbs, Machine Complete: 10 lbs

Safety Warnings

Keep hands away from blades.
Wear Proper Personal Protective Equipment (PPE)

- PPE must conform to PPE Regulation (EU) 2016/425
- Always wear safety glasses or goggles to protect against flying debris.
- To prevent hearing loss caused by prolonged exposure to noise generated by pneumatic hand tools, an exhaust muffler must be used at all times.
- Wear hearing protection in noisy environments.
- Use mesh gloves and non-slip footwear as needed.

Air Supply Safety

- Use clean, dry, regulated compressed air only. Do not use bottled gas or oxygen.
- Never exceed the maximum air pressure rating of the tool.
- Use appropriate air hoses and fittings rated for the pressure and application.

Inspect Before Use

- Inspect the tool, air hose, and fittings for damage or wear before each use.
- Do not use a damaged or malfunctioning tool—report and replace it immediately.

Secure the Work Area

- Ensure the work area is **clean, dry, and well-lit**.

- Keep bystanders, especially children, away from the work area.

Tool Handling

- Always shut off the air source and release any remaining air pressure in the lines before detaching or servicing the tool.
- Never point the tool at yourself or others.
- Maintain a firm grip and proper stance while operating the tool.

Vac-Air Industries Hand Tools are **not intended for use by**:

- Individuals **under 18 years of age**
- **Untrained personnel**
- Persons **under the influence of drugs, alcohol, or medication** that may impair judgment or coordination

Improper use may result in injury or equipment damage.

Vac-Air Industries is not responsible for the safety of any Vac-Air Industries tool used for purposes other than those specified as intended.
For user safety, it is **strongly recommended** to keep a **fully stocked first aid kit** readily accessible to treat minor injuries.

Important: Never remove or disable any **guards or protective devices** installed on Vac-Air Industries hand tools. These safety features are essential for preventing serious injury and must remain in place during all operations.

Note: Tampering with or removing the safety guard invalidates conformity with European Regulation 2023/1230. Vac-Air Industries accepts no responsibility for any consequences resulting from such actions.

Staging, access steps, handrails, and kick plates that assist the user must be designed and constructed in accordance with EN ISO 14122-2:2016 – Safety of Machinery

Risk Assessment

Hazard: Use of a hand tool to cut materials other than poultry and other meat.
Risk: Tool damage and possible operator injury due to tool failure or overload.

Hazard: Exposure to hazards if the safety guard is tampered with or removed.
Risk: Risk of severe cuts, amputations, or other injuries from contact with moving or sharp parts.

Hazard: Exposure to ejected parts such as broken metal fragments when the cylinder or motor housing cannot withstand high internal pressure due to an improperly set pressure relief valve.
Risk: Injury from flying debris; damage to 'O' rings or housing leading to tool failure.

Hazard: Exposure to hazards from a hand tool that has been modified to change its intended purpose.
Risk: Unpredictable tool behavior, mechanical failure, or serious injury.

Hazard: Operation of the tool by untrained persons, persons under the influence of drugs, or underage operators.
Risk: Increased likelihood of accidents due to lack of training, impaired judgment, or physical inability to operate safely.

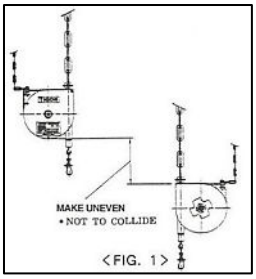
Installation

Tool Balancer Installation

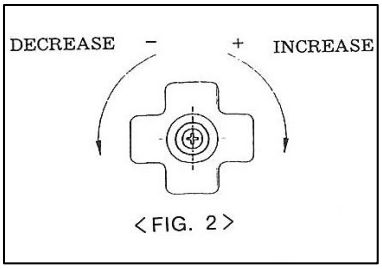
Installation (Fig.1)
Hang the balancer using the main hook.
Keep the balancer spaced properly to avoid collision with other balancers or structures.
Install the tool onto the balancer using the spring clip at the end of the cable.
The support cable must be installed on secondary hanger.
The **cable** used for suspension must **not come into contact with any fixed surfaces** to avoid wear and potential failure.

Tension Adjustment (Fig. 2)
To increase the tension, pull up on the knob below the handle and turn clockwise.
To decrease the tension, pull up on the knob below the handle and turn counter clockwise.

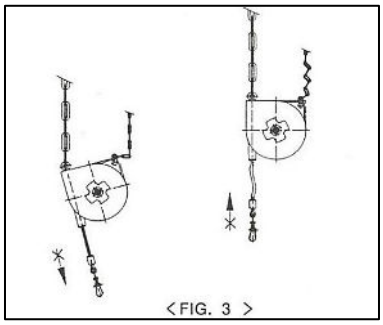
Caution (Fig. 3)
Do not pull cable at an angle as this can cause damage to the balancer.



<FIG. 1>



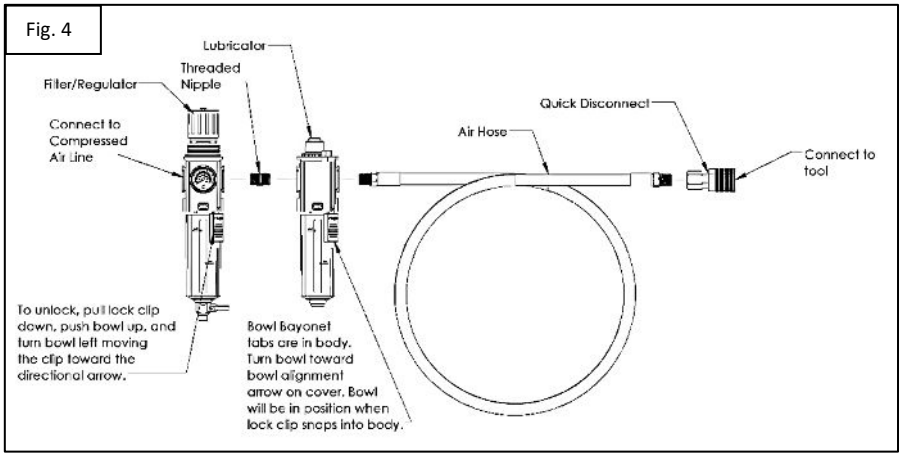
<FIG. 2>


<FIG. 3 >

Filter/Regulator/Lubricator Installation

Always turn off power of the air compressor and fully exhaust air pressure before installing or servicing the filter/regulator/lubricator (FRL) assembly. (Fig. 4)
Ensure that the air is completely exhausted prior to performing any actions.
Connect piping to the designated ports using pipe thread sealant on male threads only.
Do not allow sealant to enter the interior of the FRL assembly, as this may cause malfunction or contamination.
Install the assembly with airflow aligned to the directional arrow marked on the body.
Position and install the assembly as close as possible to the point of tool use to ensure optimal performance.
Fill the lubricator with oil. (see Lubrication section)

Fig. 4



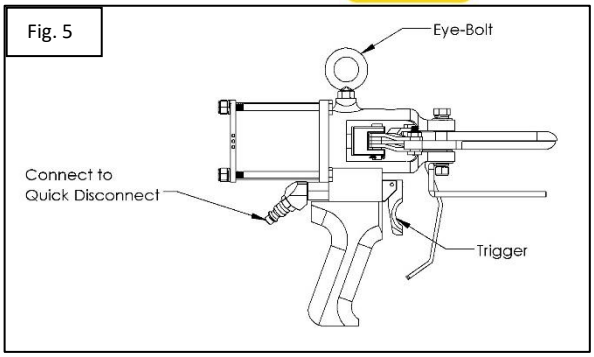
Accessories: Filter/Regulator/Lubricator Mounting Bracket

Important: Installers of compressed air, water, and vacuum sources must provide isolation valves that can be shut off and locked in the **OFF** position to ensure safe maintenance and servicing.

Tool Installation

Attach the clip on the end of the balancer to the eye-bolt attached to the top of the tool. This will allow the tool to suspend from overhead. (Fig. 5)
Lower the tool to working level using the adjustment on the tool balancer.
Attach the air hose to the tool using the quick disconnect at the end of the hose. (Fig. 5)
Suspend the air hose from overhead to reduce tension on hose.
Adjust the air pressure on the air pressure regulator to proper working air pressure. (80psi-100psi recommended)
It is unsafe to set the pressure relief valve above the clearly specified safe operating pressure. Doing so may result in equipment failure or personal injury.

Fig. 5



Operation

Clean, dry compressed air and proper lubrication are essential to ensure optimal tool performance and to extend the life of all components. Contaminated air and inadequate lubrication can lead to premature wear, reduced efficiency, and costly downtime. Maintaining these conditions is critical for the reliable and long-term operation of your equipment.
This tool is designed solely for poultry processing and evisceration. It must not be used on metal, plastic, or other non-organic materials, as this can reduce performance and lead to contamination.

Check Air Connections

- Ensure the air hose is securely connected to the tool's air inlet.
- Inspect the hose for any signs of damage, wear, or leaks.
- Confirm that the air supply is turned on and operating at the correct pressure as specified for the tool.

Engage and Use the Tool

- **To operate the blades:** Press the trigger to engage the blades.
- **To open the blades:** Release (depress) the trigger.
- The tool will only re-engage the blades when the trigger is pressed again.

Important: Do not operate the tool if any air connections are insecure or if there are any loose components. Always perform the above checks before each use.

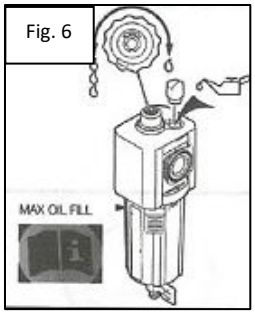
Lubrication

Required Lubrication: *Food Machinery Oil ISO 46 / Food Grade Hydraulic White Mineral Oil A/W*
Food Industry Grease, Food-Grade

Check oil in the lubricator before operation of the tool by using the sight glass. If low, unscrew the fill cap and fill to max oil fill line. Proper lubrication will ensure long lasting and proper functionality of the tool. The oil will help lubricate moving parts and lengthen the life of the internal seals.

- **Required lubrication for machine:** 1 drop (.05mL) of oil into tool per 10 cycles.

Fig. 6



Maintenance

Vac-Air Industries allows users to perform all routine preventative maintenance, including cleaning, lubrication, and basic inspections. However, if major maintenance or repairs are needed, such as internal component replacement or motor issues, the tool should be sent to Vac-Air Industries for servicing.

Note: In order to maintain conformity to European Regulation 2023-1230, only Vac-Air replacement parts must be used.

It is advised to keep a spare tool available for use while another tool is undergoing maintenance. Maintenance should be performed in a designated clean and controlled area to ensure proper handling and minimize contamination.

CAUTION:

Always shut off the air supply and release all remaining air pressure from the lines before detaching or servicing the tool.
Failure to follow this procedure can result in serious injury due to unexpected tool activation or discharge.
Before handling or inspecting the tool:

- Keep hands away from the blades.
- Press the trigger to confirm that no air pressure remains in the system.

Preventative Maintenance	Occurrence
Inspect components for wear	Daily
Check Oil Level in Lubricator	Daily
Grease between the blades	800 cycles
Inspect Blades	Daily
Sharpen Blades	800 cycles or if blades become dull
Clean the tool	Daily

Store tools in a clean, dry place when not in use.

Blade Removal-

Caution: Keep hands and arms away from the blades while performing this procedure to avoid risk of **serious injury.**
Disconnect the tool from the air supply to ensure safety before beginning any maintenance.
Secure the tool in a vise, ensuring it is stable and will not shift or move during disassembly.
Remove the Blade Shoulder Bolts (#14) from the hinging plates and blades. (BAK-PC Machine Assembly)
Remove the blade hinging locking nut (#15B) and the Blade Hinging Locking Washer (#15A) from the Blade Hinging Bolt (#15).
Slide the blade hinging bolt out of the tool to release the blade assembly.
Carefully remove the blades from the tool.
Upon reassembly, place grease between the blades for smooth operation.

Blade Adjustment-

Caution: Keep hands and arms away from the blades while performing this procedure to avoid risk of **serious injury.**
With the tool attached to air pressure, activate the blades by pressing on the trigger.
Keep trigger depressed with the blades in the closed position.
Tighten the Blade Hinging Body Bolt (#15) and the Blade Hinging Locking Nut (#15B) until the blades do not open. (BAK-PC Machine Assembly)
Release the trigger.
Slowly unscrew the nut from the Blade Hinging Body Bolt until the blades snap open.
Test the blades by cycling the blades several times.
The blades should activate and retract with ease.

Spring Replacement-

Caution: : Keep hands and arms away from the blades while performing this procedure to avoid risk of **serious injury.**
Disconnect the tool from the air supply to ensure safety before beginning any maintenance.
Secure the tool in a vise, ensuring it is stable and will not shift or move during disassembly.
Remove the cylinder bolts(#42) and the End Plate(#29).
Remove the spring.
Inspect and lubricate components that are housed inside the cylinder using the required lubrication before replacing the spring.
Use a C-Clamp to hold the End Plate in place while installing the Cylinder Bolts.

Cleaning Instructions-

CAUTION: Always shut off the air supply and release all remaining air pressure from the lines before detaching, servicing, or cleaning the tool. Failure to do so may result in serious injury due to unexpected tool activation or discharge.
Important: To maintain hygiene and prevent contamination, thoroughly clean all tool surfaces—including corners, joints, and hard-to-reach areas—where residue or debris can accumulate and lead to build-up.

For best results:

- Use warm water and a mild detergent (such as dish soap) to clean all applicable parts.
- Rinse thoroughly with hot water to remove all cleaning agents and residue.
- Ensure all areas are completely dried before reassembly or storage.

Important:
Do not use alkaline, iodine-based, or acidic cleaners, as these substances may cause corrosion or damage to tool components. Following these cleaning practices helps preserve tool performance and supports a hygienic working environment

For proper sharpening and/or maintenance, send the blades or the tool to Vac-Air Industries.

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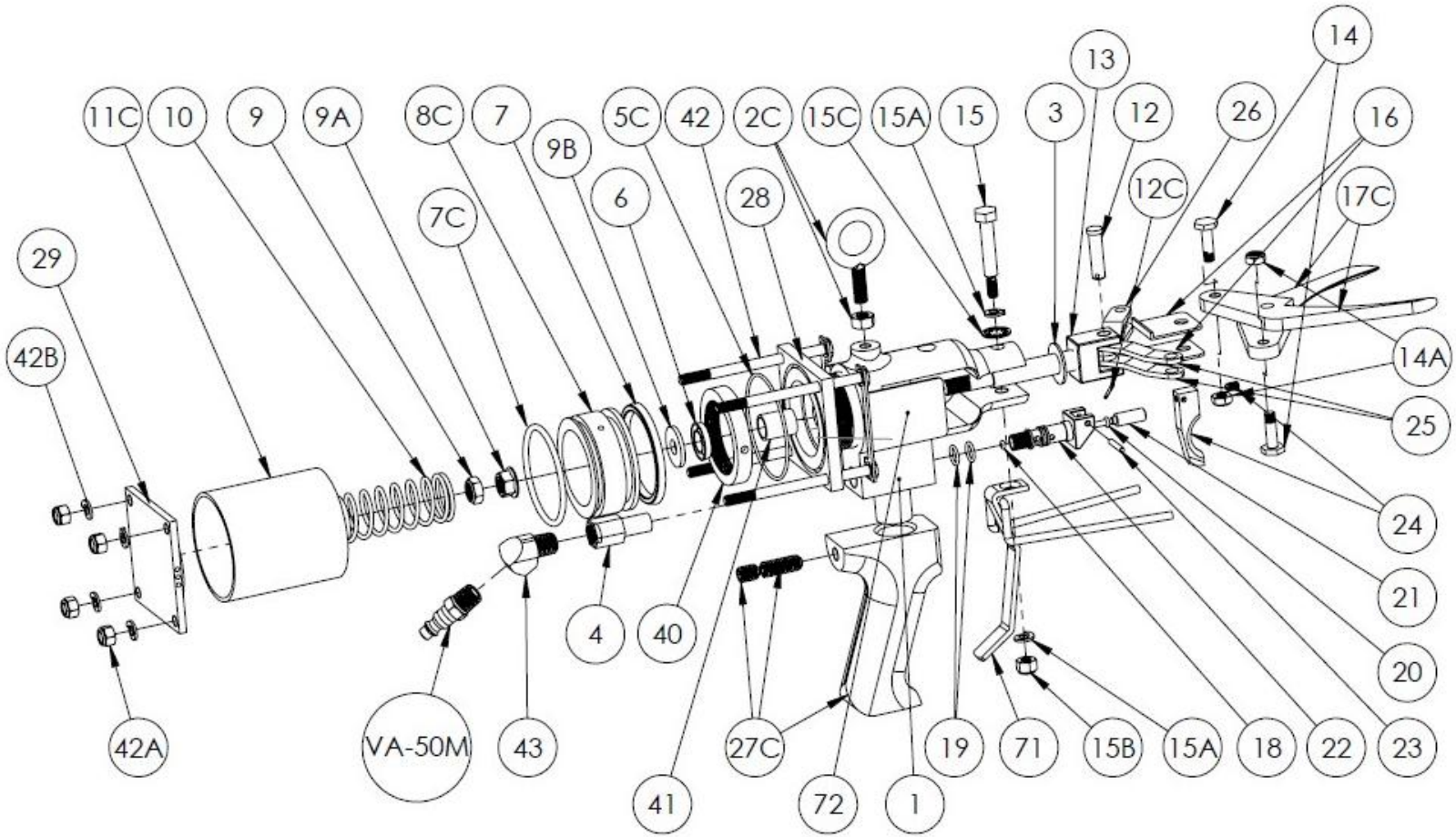

Rev. A 8/28/2026

Vac-Air Industries	
DRAWN BY: DJZ	DATE: 9/1/2023
SIZE A	DWG. NO. BAK-PC MACHINE ASSEMBLY
SCALE: 1:4	WEIGHT: 4.5lbs SHEET 1 OF 1

Part #	Description	QTY.
1	Body	1
2C	Eyebolt	1
	Eyebolt Nut	1
3	Cushion	1
4	Valve air coupling	1
5C	Cylinder Body O-Ring Front	2
6	Piston shaft seal	1
7	Piston Cup O-Ring	1
7C	Piston seal	1
8C	Piston	1
9	Locknut	1
9A	Flange Nut	1
9B	Washer	2
10	Spring	1
11C	Cylinder body	1
12	Piston shaft pin	1
12A	Cotter Key	1
13	Piston shaft	1
14	Blade shoulder bolt S.S.	2
14A	Locknut	2
15	Blade hinging body bolt	1
15A	Lockwasher	2
15B	Locknut	1
15C	Internal Tooth Washer	1
16	Set of brass shoes	1
17C	Set of radius blades	1
18	Air intake o-ring	1
19	Static o-ring (2)	2
20	Air exhaust o-ring	1
21	Air valve	1
22	Brass air body	1
23	Trigger pin	1
24	Trigger (Standard) and Set Screw	1
25	Outside hinging plates (2 Required) Price Per Unit	2
26	Inside hinging arm	1
27C	Handle	1
	Handle Set Screw (1/2")	1
	Handle Set Screw (1")	1
28	Body Plate	1
29	End Plate	1
30C	Complete set of o-rings #3,5C,6,7C,18,20 & 19(2)	
31	Trigger o-ring kit # 18,20 & 19(2)	
40	Body nut	1
41	Brass bushing (Installed in Body)	
42	Cylinder bolt	4
42A	Cylinder Bolt Nut	4
42B	Cylinder Bolt Locking Washer	4
43	45 degree elbow	1
44	Trigger assembly #4,18,20,21,22,23,24 & 19(2)	
VA-50M	Coupler Plug	1
VA-52	Air Quick Disconnect	
59	1/4" Filter/Regulator, lubricator assembly #60,61,62,63 &50	
60	Filter / Regulator	
61	Lubricator	
62	Gauge	
63	8' Rubber Hose	
64	10 lb. reel tool balancer S.S./nylon	
66	Electric blade sharpener	
67	Blade sharpener stone	
68	O-ring extractor kit	
69	Spare parts kit #30C,12,15,14(2), & 10A(2)	
70	Trigger guard	
71	Double safety guard	1
72	Closure Guard (2 Required)	2

VAC-AIR INDUSTRIES

EC Declaration of Conformity

Manufacturers Name: VAC AIR INDUSTRIES
Manufacturers Address: N56 W13580 Silver Spring Rd. Ste. A
Menomonee Falls WI, 53051

Declare that the machinery described below complies with all applicable health and safety requirements of Annex III Chapter 1 of Machinery Regulation 2123/1230 and applicable parts of Annex III Chapter 2 Subsection 2.2. Confidential Technical Documentation has been compiled in accordance with Annex IV Part B of Machinery Regulation 2123/1230 and is available to European National Authorities on written request only. If a request is received, documentation will be provided on a CD or sent by email.

Description: **Pneumatic Cutting Hand Tools.**
Model Numbers: BAK-H BAK-S BAK-PC Series Cutting Tools and
TK, TWC3 TWC4 and VAC3 VAC4 Series Cutting Tools **Serial Number/s:** (As applicable)

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The following standards have either been referred to in part or complied with in full, as appliable.

EN ISO 12100: 2010		Machinery Safety - Safety of machinery - General principles for design - Risk assessment and risk reduction.
EN ISO 13857:2008		Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs.
EN 614-2:2000+A1:2008	Safety of machinery	- Ergonomic design principles - Part 2: Interactions between the design of machinery and work tasks.
EN ISO 4414:2010	Pneumatic fluid Power	- General rules and safety requirements for systems and their components.
EN ISO 11148-2	Hand-held non-electric Power Tools.	- Safety requirements - Part 2 Cutting-off and crimping power tools.
EN ISO 15744:2008	Hand-held non-electric Power Tools	- Noise measurement code - Engineering method. (ISO 11553-3:2013 accuracy grade 2)

Full Name of Natural or Legal Person

Name: David H. Zanon Jr..... (Typed)

Position: Owner ..... (Typed)

Place of Signing

Vac -Air Industries
5254 N. 124th Street
Milwaukee WI, 53225

Signature: David H. Zanon Jr. **Date** 5/27/2025

Full Name of Authorised European Representative

EU AR: QNET B.V.
Name Drs. Ton Denissen, CEO
Date May 27, 2025
Place of Signing Haaren

Ton Denissen