

Fans & Pumps

N-Series Fans

16-24-27-29-40

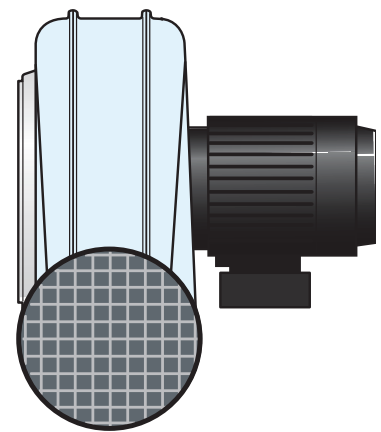
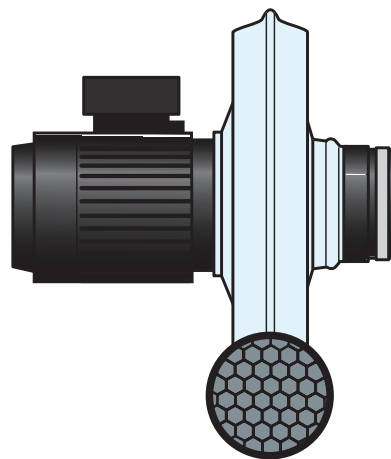
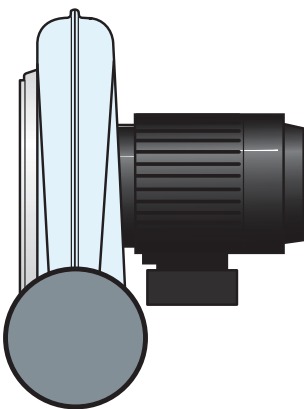
N16

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# Declaration of Conformity

## Declaration of Conformity

We, AB Ph. Nederman & Co., declare under our sole responsibility that the Nederman product: N16/24/27/29/40 (Part No. \*\*, and stated versions of \*\*) to which this declaration relates, is in conformity with all the relevant provisions of the following directives and standards:

**Directives**

2006/42/EC, 2014/30/EU, 2011/65/EU

**Standards**

EN 60204-1.

The name and signature at the end of this document, is the person responsible for both the declaration of conformity and the technical file.

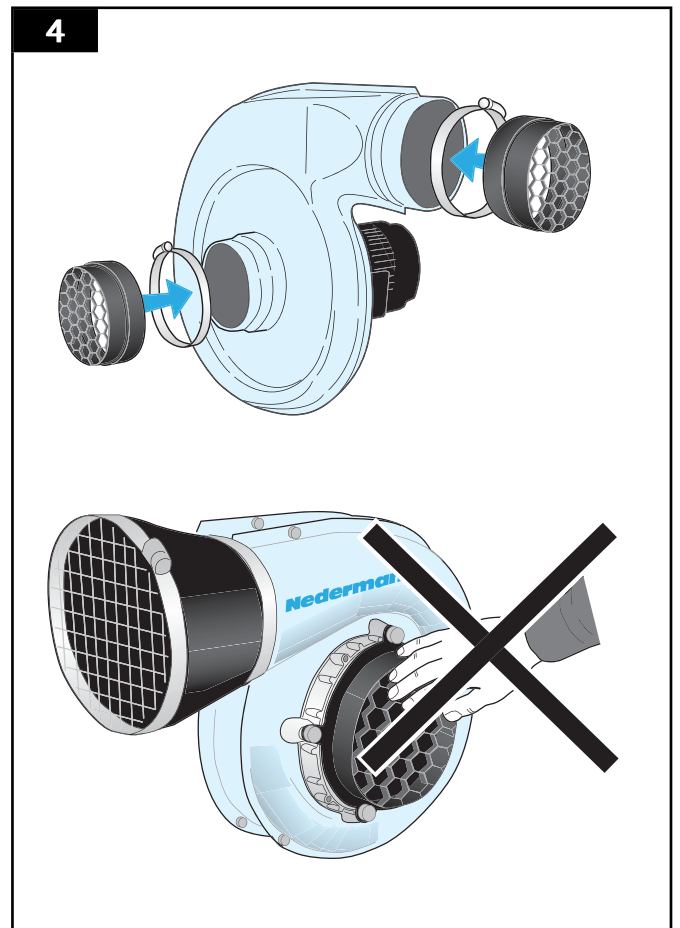
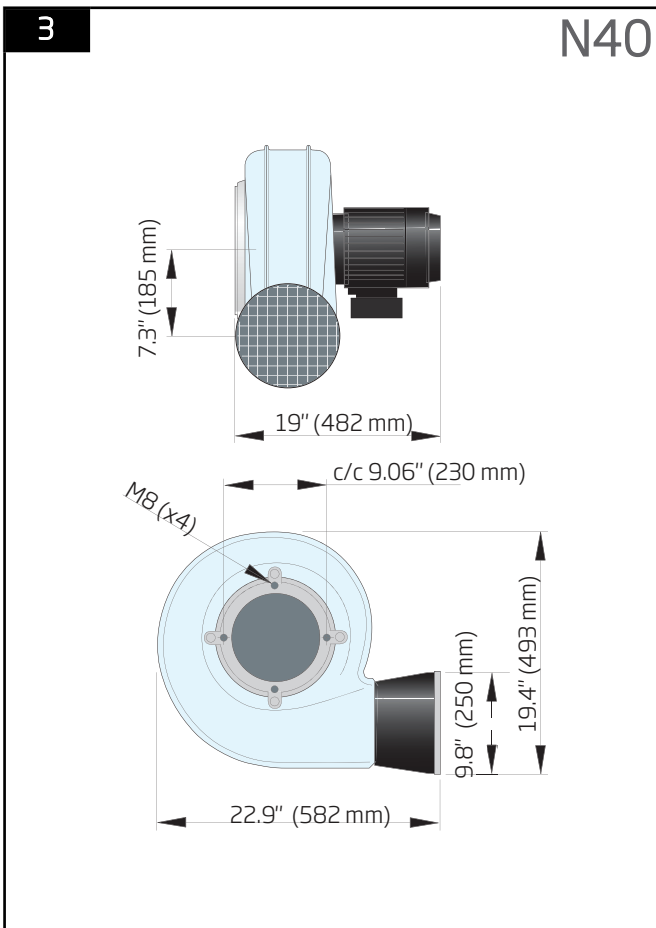
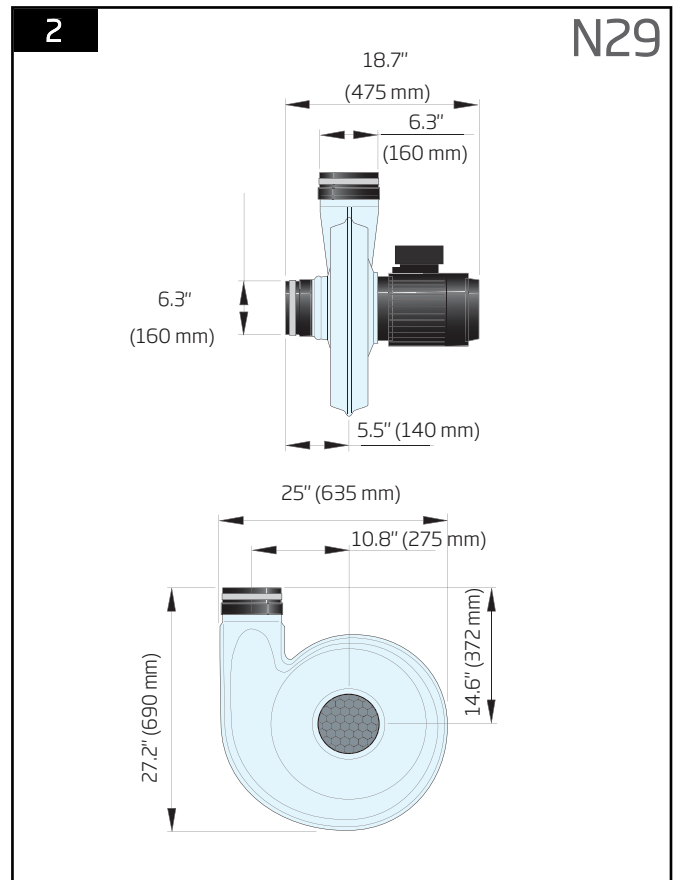
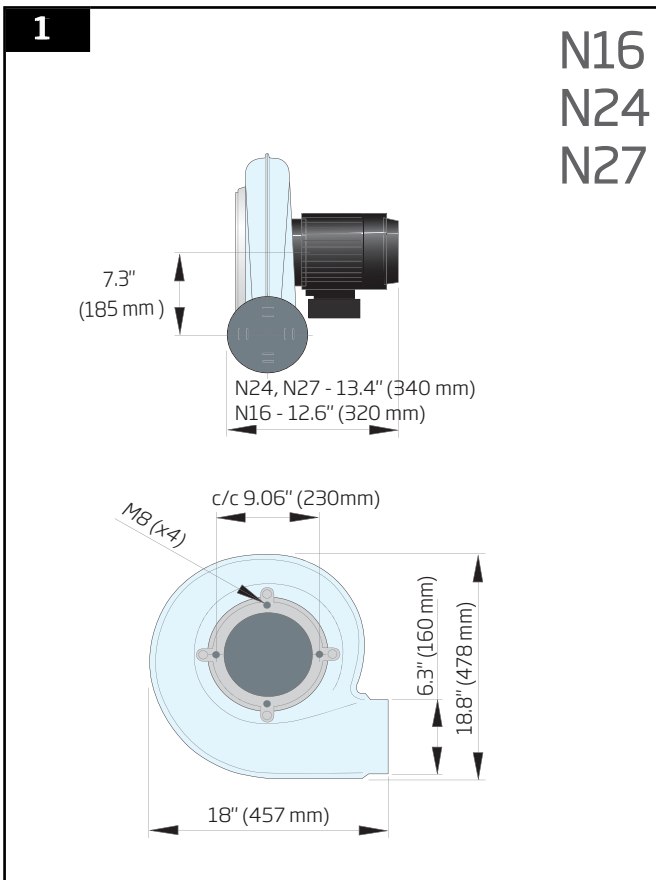


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2022-10-03



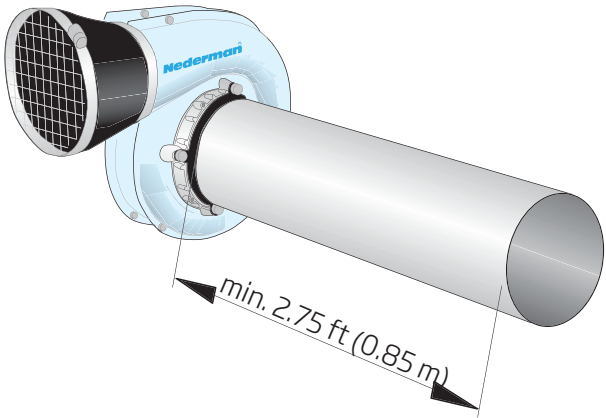
# Figures





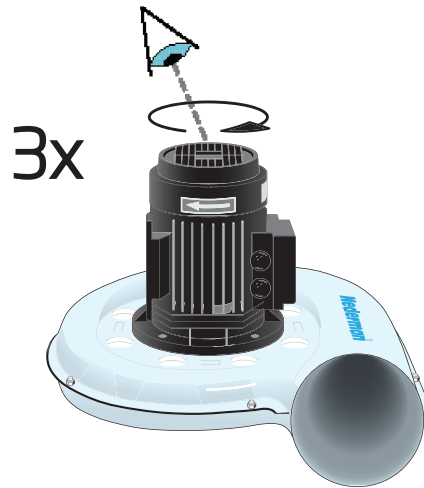
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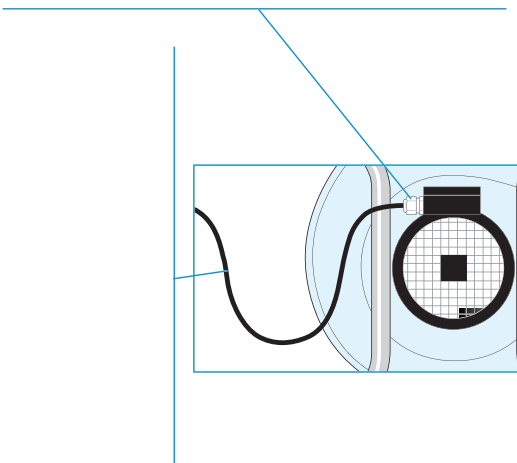
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Rotation direction

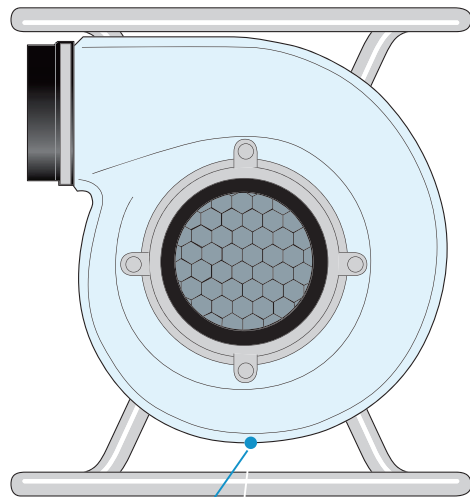


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Recommended protection class



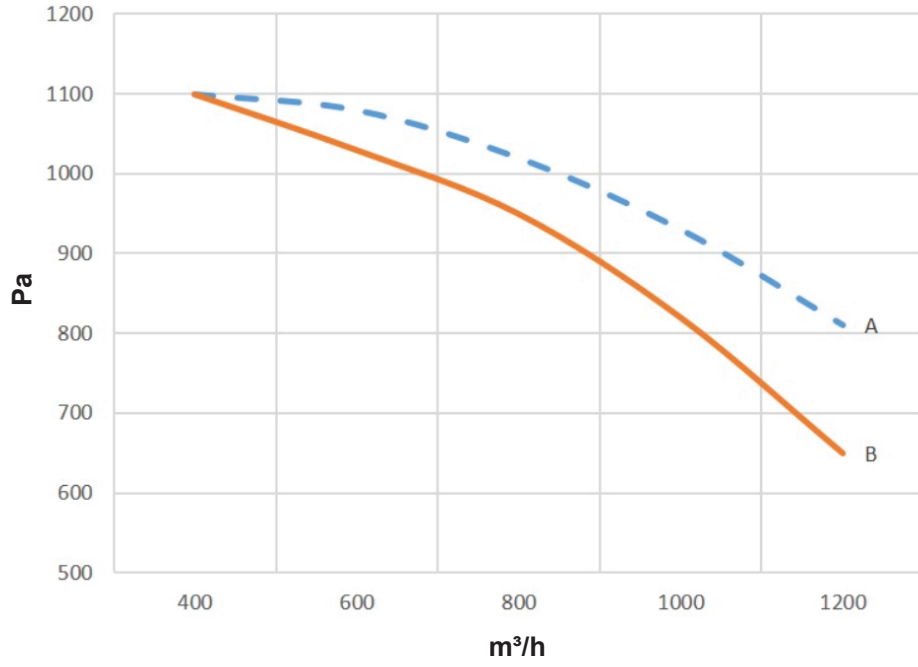
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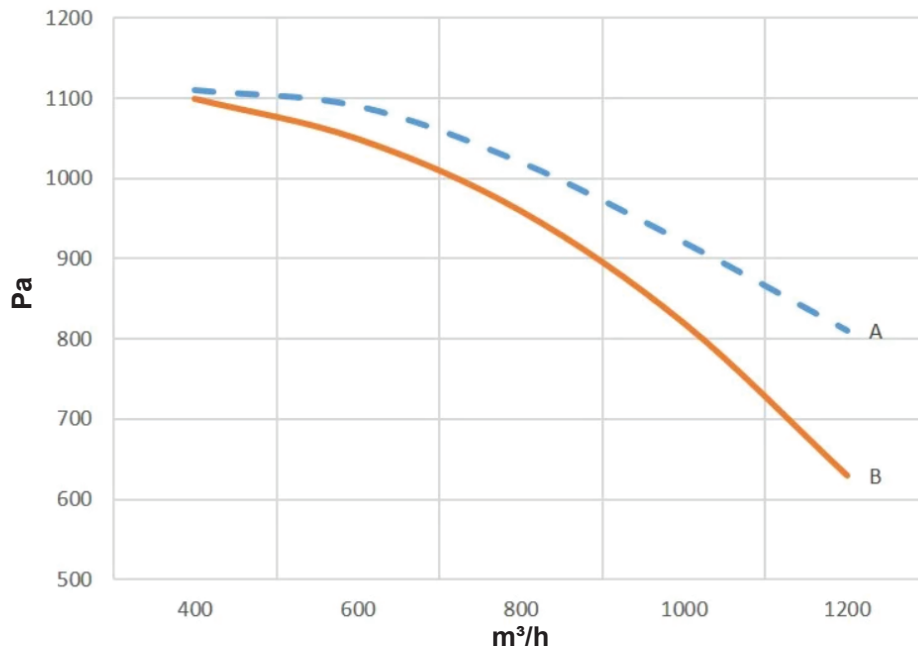
Ø 0.2" (5 mm)



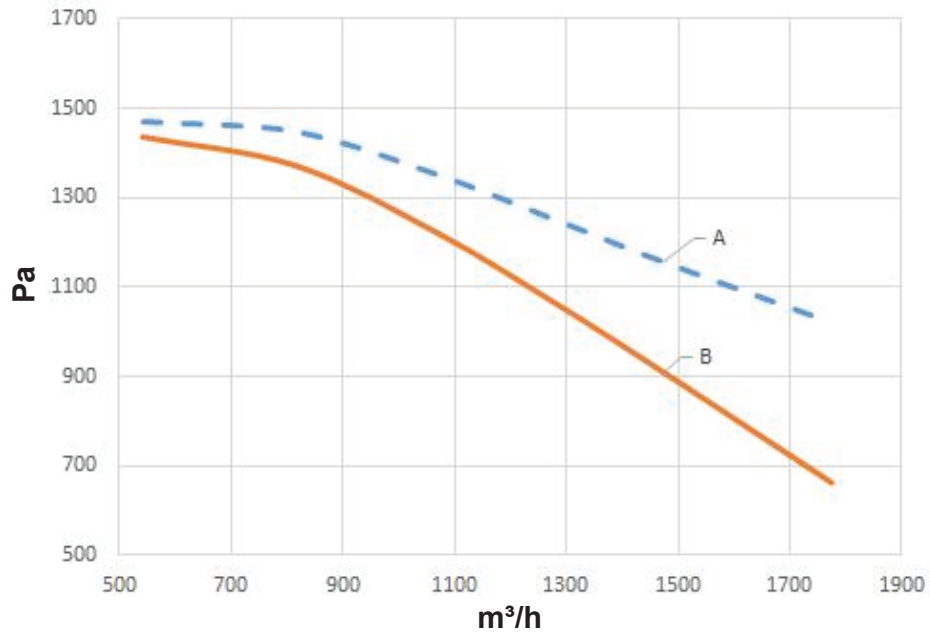
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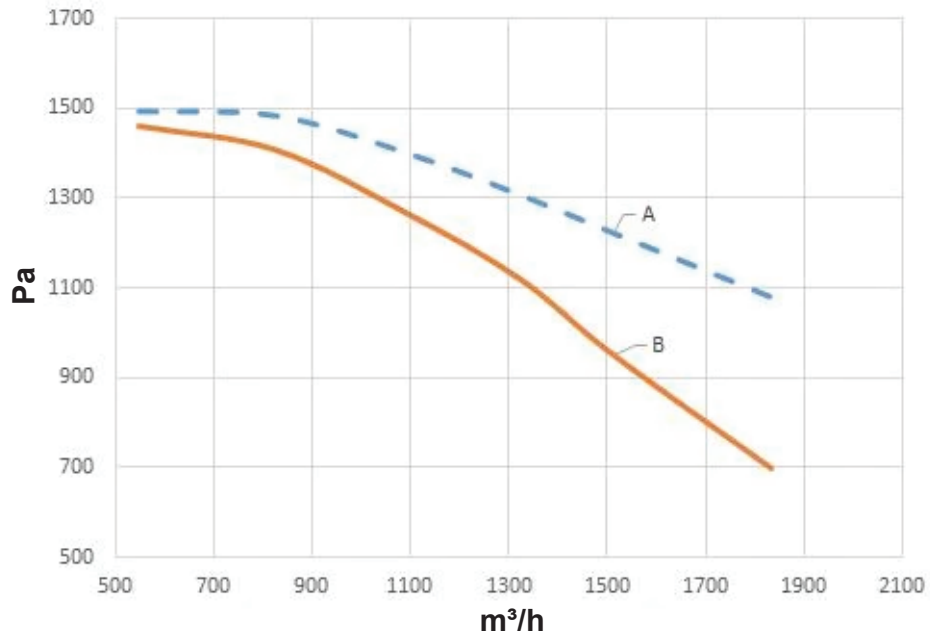
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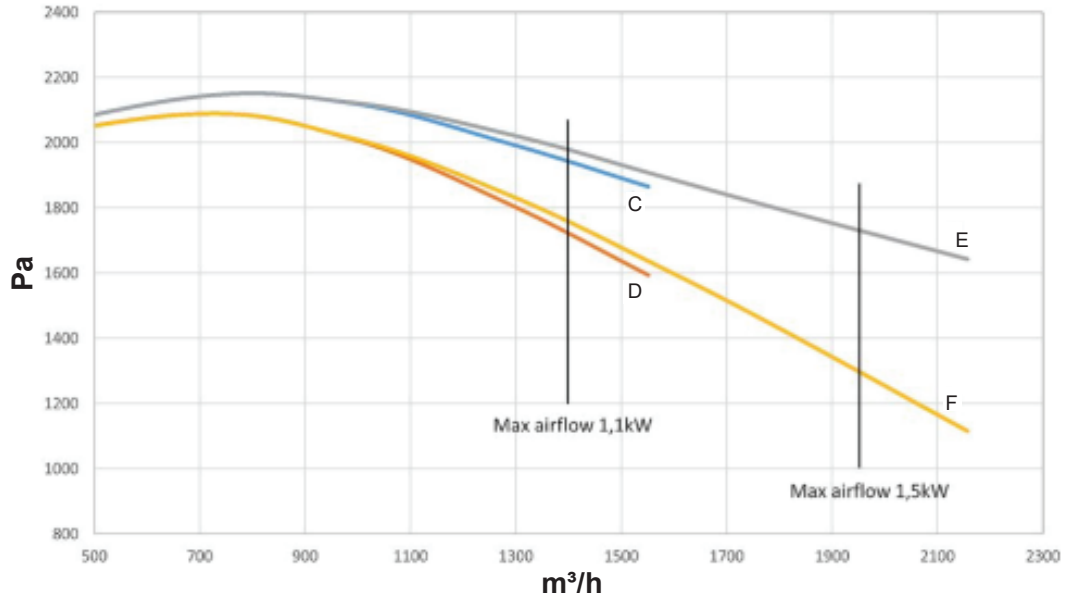
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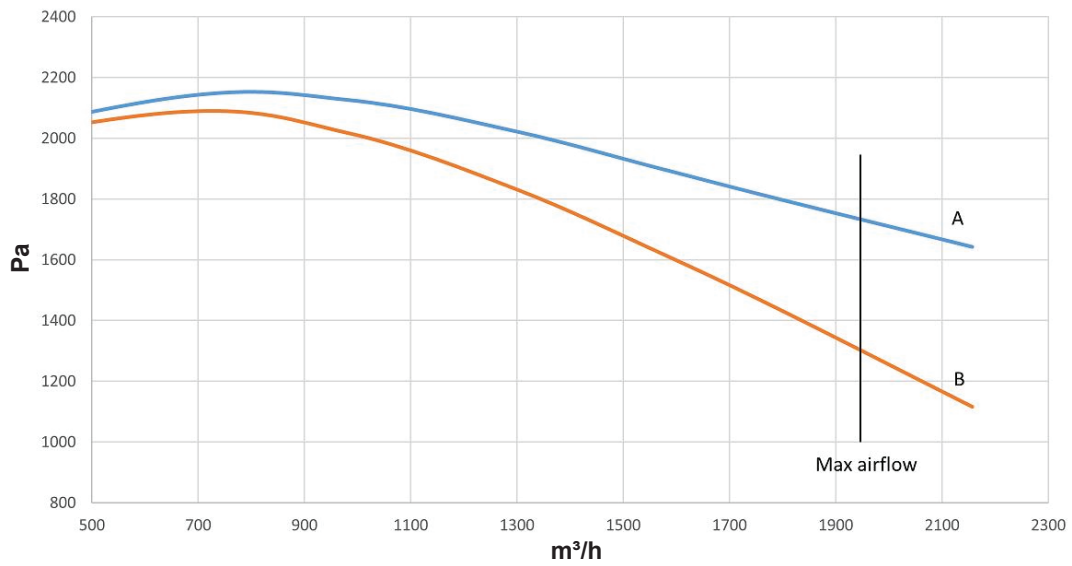
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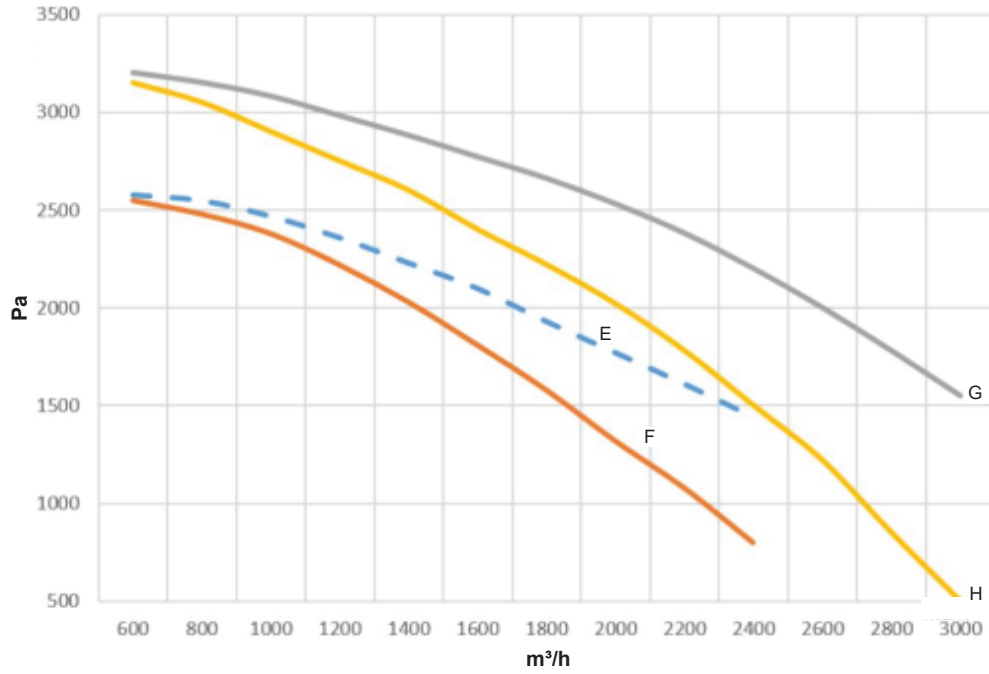
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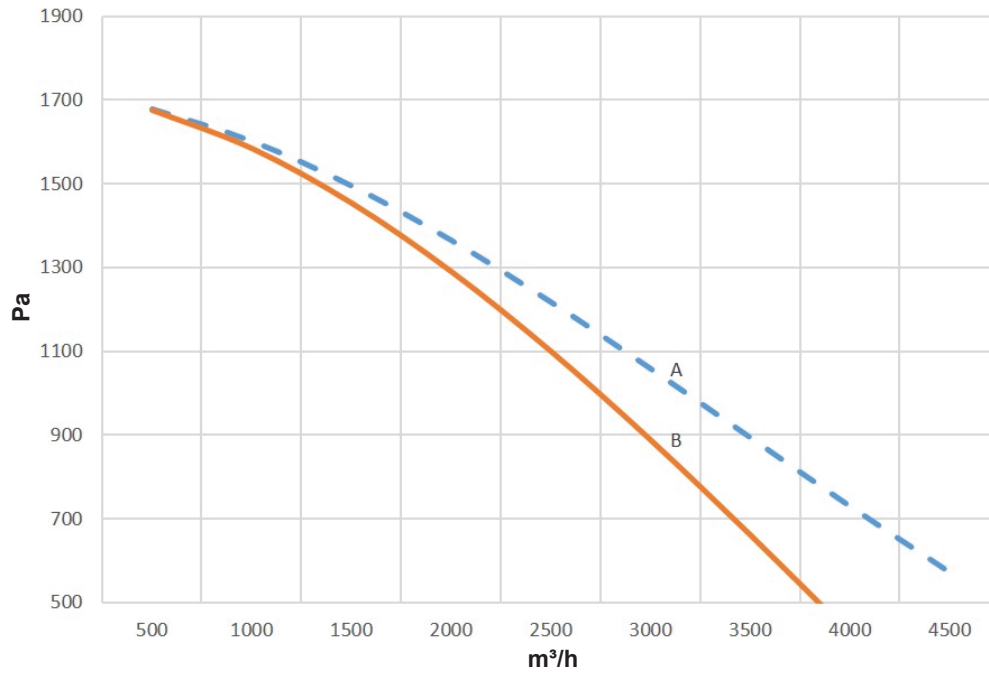
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N29 - 3 PH



N40 - 3 PH



## 1 Preface

Thank you for choosing Nederman. We are a world class supplier and developer of products and solutions for the environmental technology sector.

Review all product documentation and the identification plate carefully prior to installation, use and maintenance of this product. Replace documentation immediately if lost.

All installation, repair and maintenance must be conducted by qualified personnel using only Nederman original spare parts. Contact your nearest authorized dealer or Nederman for advice on technical service or spare parts are needed.

Please contact your carrier and local Nederman representative immediately if there are missing or damaged parts when delivered.

Nederman reserves the right, without notice, to improve our products and documentation.

## 2 Safety

This document contains hazard information that is presented as a warning, caution or note as follows:



### **WARNING! Risk of Personal Injury**

Warnings indicate a potential hazard to the health and safety to personnel and how to avoid that hazard.



### **CAUTION! Risk of Equipment Damage**

Cautions indicate a potential hazard to the product but not to personnel and how to avoid it.

NOTE! Notes contain information which the user should be aware.

## 3 Description

N-Series are centrifugal fans mainly designed for use with Nederman extraction products and ideal for welding fumes, steam dust or providing fresh air in confined and enclosed spaces. These compact fans are easy to use indoors and outdoors

### 3.1 Dimensions

See Figures 1-3 Page 4

### 3.2 Pressure Drop/Fan Curves

See Figures 9-12 Pages 6-9

- A Total pressure
- B Static pressure
- C Total pressure (1,1 kW, 1.5 hp)
- D Static pressure (1,1 kW, 1.5 hp)
- E Total pressure (1,5 kW, 2.0 hp)
- F Static pressure (1,5 kW, 2.0 hp)
- G Total pressure (2,2 kW, 3.0 hp)
- H Static pressure (2,2 kW, 3.0 hp)

## 3.3 Technical Data

Table 3-1:

	Max Airflow
• N16 - 3/4 hp (0.55 kW)	750 cfm (1250 m <sup>3</sup> /hr)
• N24 - 1 hp (0.75 kW)	900 cfm (1500 m <sup>3</sup> /hr)
• N24 - 1.5 hp (1.1 kW) (230/460V)	1030 cfm (1750 m <sup>3</sup> /hr)
• N27 - 1.5 hp (1.1 kW) (110V)	825 cfm (1400 m <sup>3</sup> /hr)
• N27 - 2 hp (1.5 kW) (230/460/575V)	1150 cfm (1950 m <sup>3</sup> /hr)
• N29 - 3 hp (2.2 kW)	1765 cfm (3000 m <sup>3</sup> /hr)
• N40 - 2 hp (1.5 kW)	1470 cfm (2500 m <sup>3</sup> /hr)
• N40 - 3 hp (2.2 kW)	2350 cfm (4000 m <sup>3</sup> /hr)
Motor power	See product label
Motor speed	See motor label
Voltage/Phase	See motor label
Frequency	See product label
Rated current	See motor label
Weights:	
• N16	29 lbs (13 kg)
• N24	37 lbs (17 kg)
• N27	37 lbs (17 kg)
• N29 - 3 hp (2.2 kW)	71 lbs (32 kg)
• N40 - 2 hp (1.5 kW)	55 lbs (25 kg)
• N40 - 3 hp (2.2 kW)	64 lbs (29 kg)
Temperature	
	(-22°F to +104°F (-30°C to +40°C))
Airflow Temperature	max+140°F)(+60°C)
Noise Level: **	
• N16	74-76 dB(A)
• N 24	75-79 dB(A)
• N27	75-79 dB(A)
• N 29	70-80 dB(A)
• N 40	60-80 dB(A)

\*\* According to ISO 11203, with duct connected to inlet and outlet.

## 4 Installation

### 4.1 Mounting instructions N16/24/27/29/40



**WARNING! Risk of explosion.**

The fan must not be installed in an environment with danger of explosion or be used to transport flammable or explosive dust or gases.



**WARNING! Risk of personal injuries.**

Guard nets must be mounted on the inlet and outlet of the fan, unless the fan is fixed and/or directly connected to ducting system. See Figure 4 page 4.



**WARNING! Risk of personal injuries.**

A duct or hose must be fitted on the N40 fan inlet. See Figure 5 page 5.

Ensure the fan has not been damaged during transport. Fans without a stand are designed to be mounted directly to other Nederman products.

If the fan is fitted to be mounted on a wall or in the ceiling, vibration secured fixing bolts suitable for the wall or ceiling material are to be used. The bolts must each stand a torque force of minimum 800 N.

If the fan is to be used indoors and is not mounted on another Nederman product, it is to be mounted as near the outlet in the room as possible, in order to give under pressure in the ductwork.

## 4.2 Electrical installation

Check that the mains voltage is the same as on the fan's sign plate. Then connect the fan according to the wiring diagram in the fan's junction box. It is re-commended to supply the fan with a lockable safety switch on the mains connection cable. A motor over-load protector is always to be included in the electrical installation.

Variable speed drive is not an option with 1-phase fans with standard motors.

1 or 3-phase fans, a frequency converter can be used. (max frequency is the rated frequency).

# 5 Use 16/24/27/29/40

## 5.1 Starting Instructions



### **WARNING! Risk of Personal Injury**

The fan must not be used without ductwork connected unless the inlet and outlet are equipped with approved guard nets.



Ear protectors is to be worn when working near the fan.

Check the cable connections for tightness.

Check the grounding of the electric motor.

Start the fan and check that it operates without any excessive vibration and noise.

On 3-phase fans it is recommended to check that the motor shaft rotates in the right direction (see rotation arrow on the motor). If the shaft rotates in the wrong direction, two of the connection cable conductors must be reversed. See Figure 6.

## 5.2 Outdoor Use / Draining

**Recommended protection. IP68. See figure 7 Page 5.**

If the fan is to be used without any protection outdoors or under other circumstances where moisture and condensation can be present, it must be verified that the motor has draining holes. Verify these holes are open and not clogged. In the lowest level in one of the fan casings, a draining hole must be drilled (approx. 0.2" (5 mm)), see Figure 8. Then treat the hole with an anti-corrosive agent.

If the motor is not provided with draining holes the fan must be protected with a suitable cover.



## 6 Maintenance



### WARNING! Risk of personal injury

- Always disconnect the fan motor from mains with the isolator before starting any maintenance or repair work.
- Always use a breathing mask when repairing and servicing the system.



### WARNING! Risk of personal injuries.

Always use a respirator when repairing and servicing the system.

Installation, repair and maintenance work is to be carried out by qualified personnel using only original Nederman spare parts. Contact your nearest authorized distributor or Nederman for advice on technical service.



### NOTE! Service intervals are based on the unit being professionally maintained.

Maintenance is recommended at least once a year.

- Listen for noise and touch the fan casings with the hand and notice if the fan vibrates in an abnormal way. If necessary, disconnect the fan from power, dismount the fan and clean the impeller (not possible on N29 fan).  
(wear a respirator)
- Check the fan's suction capacity. On 3-phase fans, check that the motor shaft rotates in the right direction. Check that the ducts are not blocked. Clean if necessary (wear a respirator).
- Check the electrical installation.
- Check that the power cable is not worn or damaged.
- If the fan has been mounted on a wall or in the ceiling, check the fittings.
- Check and tighten any loose duct connections.
- Check that the guard nets are in position.

## 6.1 Spare Parts



### CAUTION! Risk of equipment damage

Use only Nederman original spare parts and accessories.

Contact your nearest authorized distributor or Nederman for advice on technical service or if you require help with spare parts. See also [www.nederman.com](http://www.nederman.com).

### Ordering Spare Parts

When ordering spare parts always state the following:

- The part number and control number (see the product identification plate).
- Detail number and name of the spare part  
(see [www.nederman.com/en/service/spare-part-search](http://www.nederman.com/en/service/spare-part-search)).
- Quantity of the parts required.

## 7 Recycling

The product has been designed for component materials to be recycled. Different material types must be handled according to relevant local regulations. Contact the distributor or Nederman if uncertainties arise when scrapping the product at the end of its service life.

# Nederman

The Nederman Group is one of the World's leading suppliers of products and solutions within the environmental technology sector focusing on industrial air filtration and recycling. These products and solutions reduce the environmental impact of industrial production and create safe and clean working environments while boosting production efficiency.

The group's offering covers the design stage through installation, commissioning and servicing with subsidiaries in 29 countries and agents and distributors in over 30 countries.

Nederman is ISO 9001 and 14001 certified and develops and produces in its own manufacturing and assembly facilities in Europe, North America and Asia.

## Nederman Service Capabilities

Nederman has certified service partners trained extensively in servicing our machinery. Make sure to choose a certified technician to service your Nederman equipment as they have the correct tools and knowledge to solve any machinery issues and improve its performance. Be sure to ask if your technician is certified by Nederman.

Our services for extraction and filtration systems are customized to your particular needs. We work with you to understand your needs, then develop a program to meet your specific needs. Our services include: *(not all services available in all locations)*

- Bag & Filter Change-outs
- Bag Selection Recommendations
- Collector Re-builds
- Dye Testing for Leakage
- Electrical Tests - Current, Voltage
- Emergency Call-outs
- Filter Media Analysis
- Mechanical Survey and Repair
- Multi-year Contracts
- New Collector Start-up Service
- On-going Technical Support
- Preventative Maintenance Programs
- Repair and Replace  
Gauges/Timers/Valves
- Stack Emission Testing
- Training Programs
- Troubleshooting / Auditing
- Velocity, Pressure and Temperature Tests
- Written Service Report

## Customer Service and Technical Support

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