

WINDPROOF VENT COVER CATALOG

Windproof Vent Cover

Exterior exhaust outlet protection for wind, rain, backdraft reduction, and stable exhaust performance

The Windproof Vent Cover is designed for exterior exhaust outlets on building walls. It helps reduce the impact of strong wind, wind-driven rain, and outside airflow interference at the end of the exhaust system.

Through dual-duct flow diversion, ring-shaped airflow guidance, and a multi-layer protective structure, the vent cover supports more stable exhaust performance for bathroom, kitchen, and other exhaust outlets exposed to high wind pressure.

Dual-duct flow diversion

Ring-shaped airflow guidance

304 stainless steel

Wind tunnel test reference

Custom color finish

Exterior wall application

Wind pressure reduction

Rain intrusion reduction

Stable exhaust support



Wind Pressure Reduction

Helps reduce direct wind impact at the exterior exhaust outlet.

Rain Intrusion Reduction

Helps reduce the risk of wind-driven rain and moisture entering the exhaust opening.

Stable Exhaust Support

Supports more stable exhaust direction under windy exterior conditions.

Model Selection Support

Available for bathroom and kitchen exhaust applications with different duct sizes.

Project evaluation note: Duct size, exhaust purpose, exterior wall position, waterproofing edge treatment, and front-end exhaust equipment should be reviewed together before selection.

The exterior exhaust outlet is where ventilation systems meet wind, rain, and pressure changes

Bathroom, kitchen, and other indoor exhaust systems eventually release air through an exterior wall outlet.

When exhaust performance becomes unstable, the issue is not always caused by the fan, range hood, or front-end equipment. In many cases, the exterior exhaust outlet is where the system is most affected by outside wind pressure, rain, and airflow changes.

If strong wind or wind-driven rain directly interferes with the exhaust opening, the airflow that should move outward may become unstable. In some conditions, outside air, odor, or moisture may even move back toward the indoor space.

The role of a Windproof Vent Cover is not only to cover the outlet. It is to help reduce outside environmental interference at the exhaust end and support more stable ventilation performance.



Strong Wind Backdraft

Outside wind pressure may disturb the exhaust outlet and push airflow back toward the duct.

Odor Return

Odor may return indoors under certain wind directions, weather conditions, or operating conditions.

Rain Intrusion

Wind-driven rain and moisture may enter the outlet if the exterior opening is not properly protected.

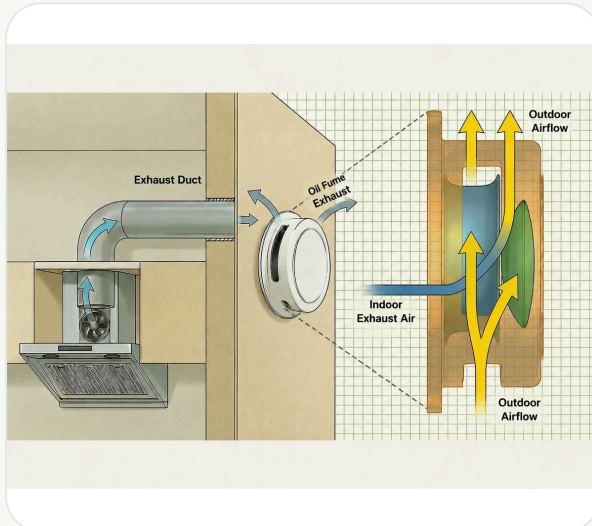
Unstable Exhaust

Even when the front-end fan is operating, exterior wind conditions may still affect the exhaust result.

The vent cover should be evaluated together with duct size, exhaust purpose, exterior wall location, waterproofing edge treatment, and the connected exhaust equipment.

Dual-duct flow diversion designed to reduce direct wind pressure at the exhaust outlet

The design focus of the Windproof Vent Cover is to reduce direct conflict between indoor exhaust airflow and outside wind at the exterior outlet.



Indoor Exhaust Air

Indoor exhaust air enters the vent cover, changes direction through the internal guide structure, and exits through the ring-shaped airflow path.

Outside Wind

Outside wind is redirected and dispersed by the cover structure, helping reduce direct wind pressure against the duct opening.

Dual-duct Flow Diversion

The internal structure helps separate indoor exhaust airflow from outside wind influence, reducing the risk of direct wind entry into the exhaust duct.

Multi-layer Protective Structure

The outer round cover and internal protective layers help manage exhaust discharge, rain shielding, and airflow dispersion.

Ring-shaped Airflow Guidance

The airflow path guides exhaust air around the outlet and helps maintain a more stable exhaust direction.

The Windproof Vent Cover is designed to help reduce wind interference and rain intrusion. Actual performance still depends on duct size, installation condition, exterior wall position, front-end equipment, and site environment.

A vent cover should be evaluated by how it handles wind pressure, not only by appearance

A general vent cover may provide basic outlet coverage and rain shielding. In high-rise buildings, wind-facing walls, coastal areas, rainy locations, or sites with repeated backdraft issues, outlet design should also consider how wind pressure affects exhaust performance.

Comparison Table

Item	General Vent Cover	Windproof Vent Cover
Main Function	Basic outlet covering and rain shielding.	Wind, rain, backdraft reduction, and exhaust stability support.
Airflow Design	Mainly cover-based.	Dual-duct flow diversion and airflow guidance.
Windy Conditions	More affected by outside wind pressure.	Designed to support more stable exhaust under windy conditions.
Rain and Moisture	Depends on shape and installation quality.	Designed to help reduce rain intrusion risk.
Suitable Conditions	General exhaust outlets.	High-rise, wind-facing, rainy, humid, or backdraft-prone locations.

Wind Tunnel Test Reference

- Testing laboratory:
Department of Civil Engineering Wind Tunnel Laboratory, National Central University
- Test No.: CE-WT-2021-001
- Test date: January 21, 2021
- Test product: Kitchen Exhaust Windproof Vent Cover, H06 specification
- Test conditions: wind speed of 51.5 m/s, approximately level 16 wind, with frontal and side wind directions.
Test duration: 1 minute.

Wind Speed Test Data

Wind Level	External Wind Speed m/s	Average Pipe Inlet Wind Speed m/s
10	24.5–28.4	8.75
11	28.5–32.6	9.47
12	32.7–36.9	11.00
13	37.0–41.4	12.71
15	46.2–50.9	13.87
16	51.0–56.0	14.53

Under high wind pressure interference, the outlet design demonstrated exhaust stability under the stated test conditions. This information should be presented as a test reference, not as a guarantee for every site condition.

Suitable applications and model selection

The Windproof Vent Cover is suitable for exterior exhaust outlets where wind, rain, odor return, or unstable exhaust may affect the ventilation system.

Bathroom Exhaust Outlets

For bathroom exhaust systems, ventilation outlets, and heater fan exhaust outlets.

Kitchen Exhaust Outlets

For kitchen exhaust and range hood exhaust outlets where wind pressure and odor return need to be considered.

High-rise or Wind-facing Walls

For exterior walls exposed to stronger wind pressure or frequent pressure changes.

Rainy, Humid, or Coastal Environments

For locations where rain intrusion, moisture, and corrosion resistance are important considerations.

Backdraft-prone Locations

For outlets where odor return, unstable exhaust, or outside air intrusion has occurred.

Exterior Wall Applications

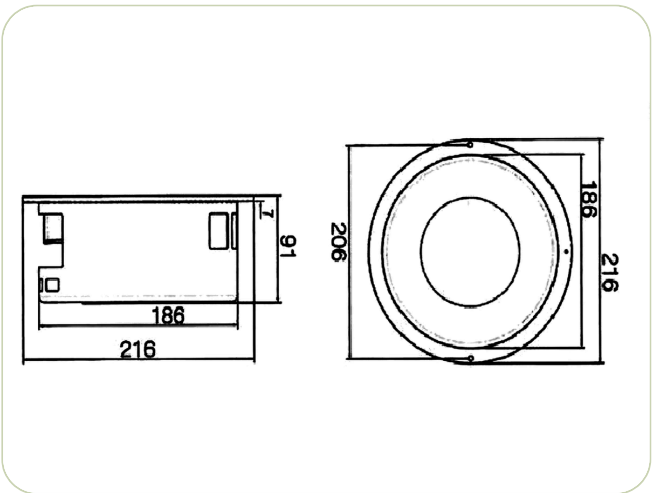
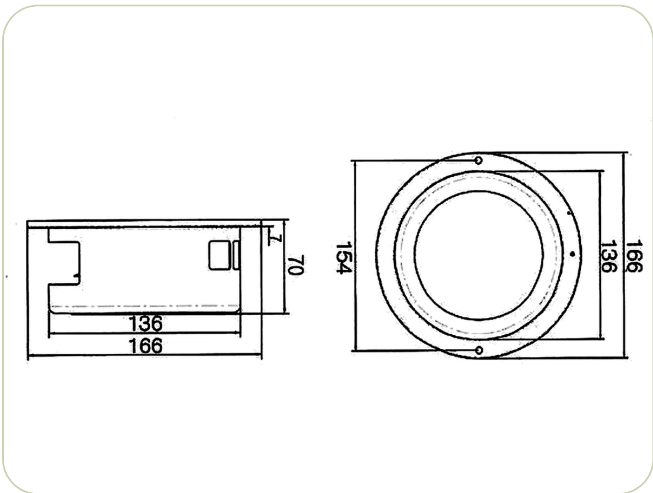
Model selection should be reviewed together with duct size, outlet opening, and installation conditions.

Bathroom Series

Model	Applicable Duct Size	Common Use
HG-F03	3" / 7.5 cm	Bathroom exhaust, ventilation outlet
HG-F04	4" / 10 cm	Bathroom exhaust, heater fan exhaust outlet

Kitchen Series

Model	Applicable Duct Size	Common Use
HG-H05	5" / 12.5 cm	Kitchen exhaust, range hood exhaust outlet
HG-H06	6" / 15 cm	Kitchen exhaust, larger duct exhaust outlet



Information to confirm before selection and installation

A Windproof Vent Cover should not be selected only by appearance. Before selection, the project should confirm duct size, exhaust purpose, exterior wall location, opening condition, waterproofing edge treatment, and the front-end exhaust equipment.

Selection and Installation Checklist

1

Exhaust Purpose and Duct Size

Confirm whether the outlet is used for bathroom exhaust, heater fan exhaust, kitchen exhaust, range hood exhaust, or another ventilation purpose.

2

Exterior Wall Position and Wind Exposure

Confirm whether the outlet is located on a high-rise wall, wind-facing wall, coastal area, or location with frequent strong wind exposure.

3

Opening and Connection Condition

Check the existing wall opening, duct connection, outlet direction, and whether the opening condition allows proper installation.

4

Waterproofing Edge Treatment

Exterior wall installation should include suitable edge sealing and waterproofing treatment to reduce rain intrusion risk around the installation area.

5

Front-end Exhaust Equipment

Confirm the connected exhaust fan, heater fan, range hood, or other exhaust equipment. Outlet selection should match the actual exhaust system.

Recommended Information Before Quotation

- Exterior wall photos
- Close-up photos of the exhaust outlet
- Duct size
- Exhaust purpose
- Bathroom, kitchen, or other application type
- Existing outlet opening condition
- Wind, rain, odor return, or backdraft issue description
- Building floor level and exterior wall exposure condition
- Expected installation timing

Need help selecting a Windproof Vent Cover?

For product selection, project evaluation, or quotation support, please contact HENGJHU Company Limited.

[Request a Quote](#)
[Book a Technical Consultation](#)
[Contact Us](#)

A stable exhaust system should be evaluated from the whole path: front-end equipment, duct condition, exterior wall outlet, and site environment. The Windproof Vent Cover helps improve the exhaust end where the system meets wind, rain, and outside pressure changes.