

FC-RBV-31 High Performance Blast Valves

PATENTED

**Standing peak pressure
reflected up to 20 bar for
long duration**

**Blocking approximately
100% impulse energy**

**Double acting for both
positive and negative
pressure hits**

**Streamline outline
enabling the high air
flow efficiency**

**Auto-reset function to
minimize the maintenance**

FC-RBV-31 high performance blast valves are specifically developed for those applications where high air flow rate and blast protection from high peak pressure are required. It could stand the overpressure up to 20 bar reflected with long duration and shut off in milliseconds. It also could stand multiple blast impacts and maintain full functions after blasts. Its stream-line shape enables the high air flow efficiency.

FC-RBV-31 high performance blast valves could serve wide range applications, including civil defense, OGP, nuclear power, chemical, etc.

[Product Features and Benefits]

- > **High performance of blast resistance**
Being able to stand multiple blast impacts with peak pressure reflected up to more than 20 bar by long duration and maintain all functions after blasts.
- > **High performance of protection**
Being able to completely close in very short time to assure approximately 100% impulse block rate.
- > **High ventilation volume**
Ensuring the high air flow efficiency with the streamline design.
- > **Automatic-reset**
Being able to retrieve ventilation function automatically after the blast so as to minimize the maintenance.
- > **Double acting**
Providing protection from both positive pressure hit and sucking phase.
- > **High corrosion resistant performance**
Being made of chemical-resistant materials and fit for all corrosive conditions.

[Part Numbers]

ATO PN: FCRBV31-[A]-[B]-[C]-[D]

A	B	C	D
Model	Installation	Materials of valve body	Materials of blade
1-D150	OW-Surface mounted to wall sleeves casted in concrete wall	1-Stainless Steel 316	1-Stainless Steel 316
2-D250	IW-Casted in concrete wall with valve base block surface mounted	2-Stainless Steel 304	2-Stainless Steel 304
3-D350	D-Duct connected	3-Hot galvanized steel	

[Product Specifications]

Designed peak pressure: >20 bar peak pressure reflected

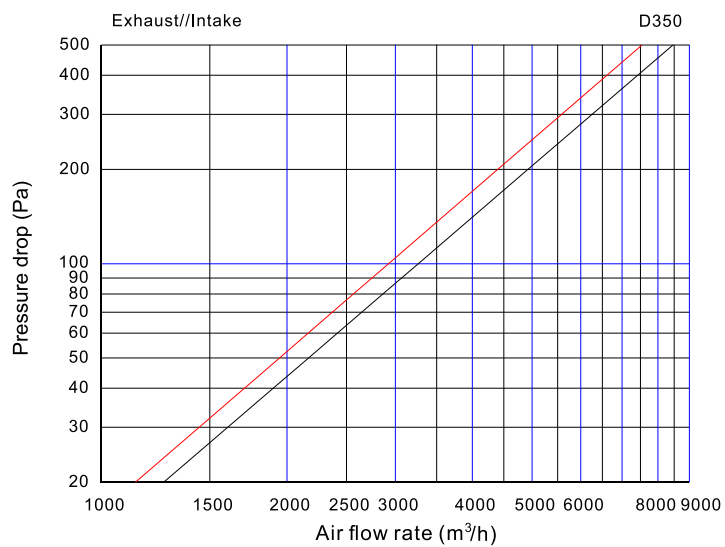
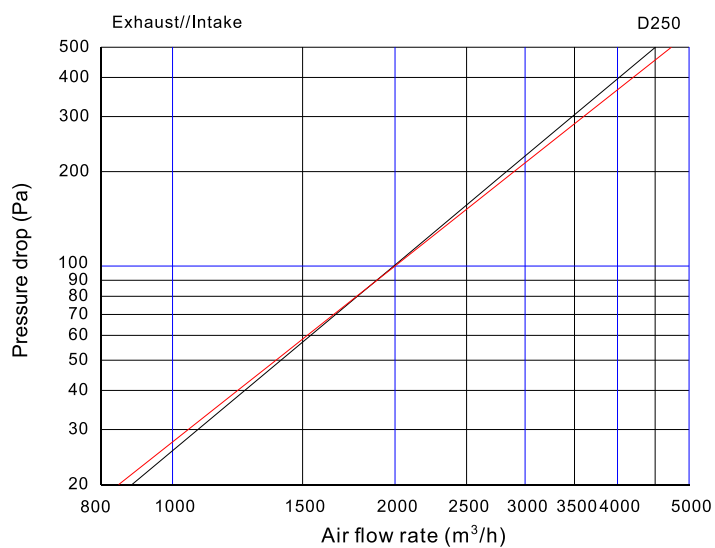
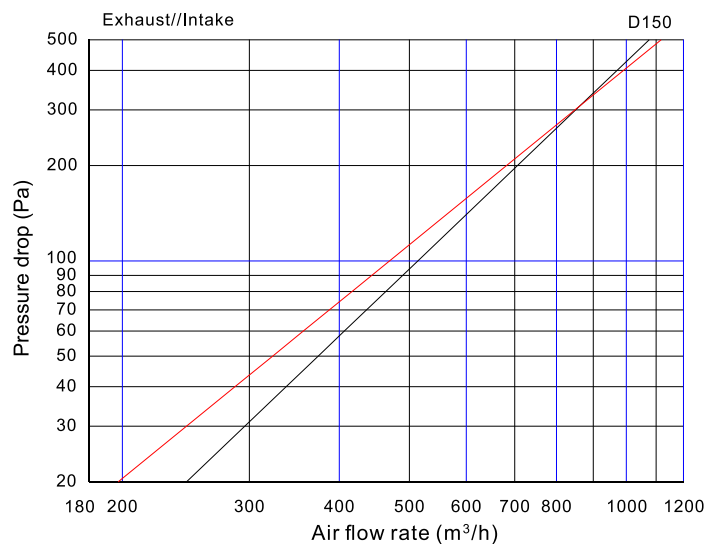
Designed blast duration: >30 ms

Impulse block rate: >99% (20 bar reflected/30ms)

High temperature resistance: >40 mins at 300°C

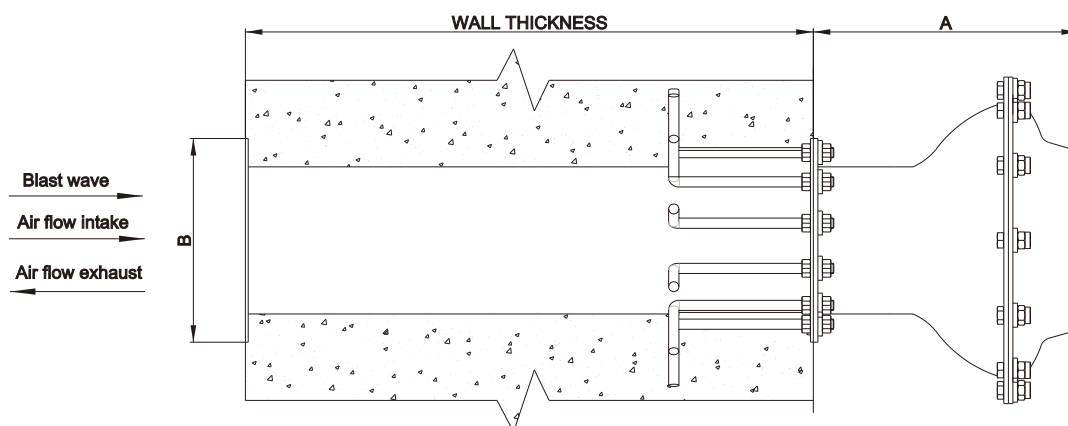
Certification: Product is type tested by VTT, Finland

[Air Flow vs Pressure drop]



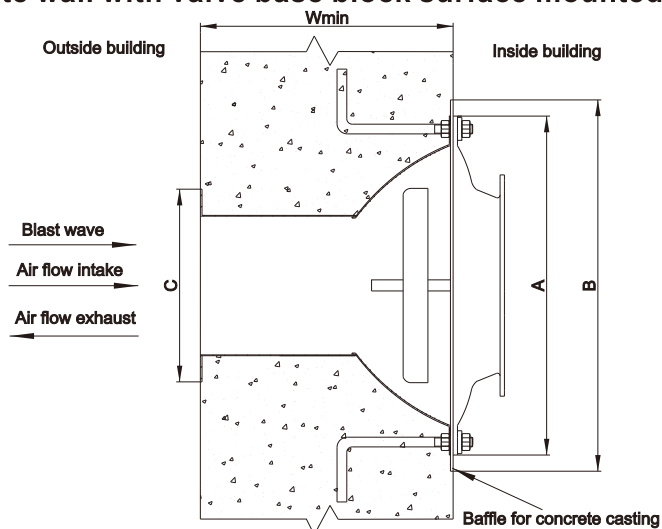
[Installation types and size]

i. Surface mounted to wall sleeves casted in concrete wall (Type FC-RBV-31-OW)



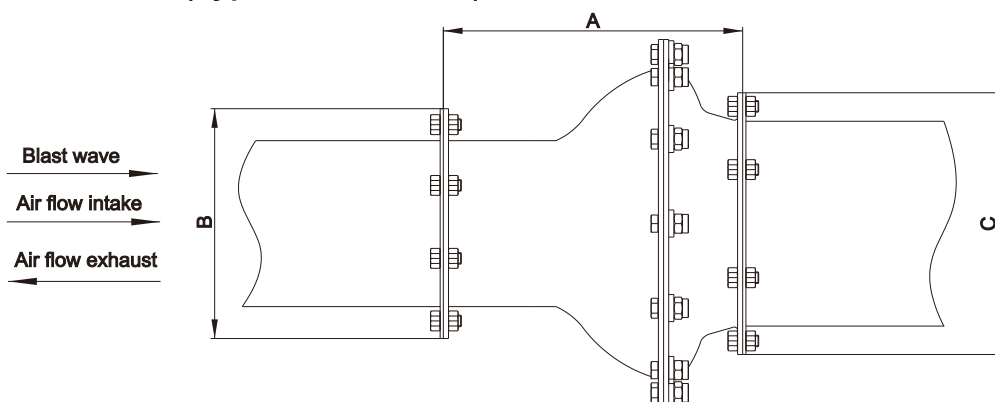
MODEL	A (mm)	B (mm)	Air Flow at 100 Pa Intake/Exhaust (m³/h)	Air Flow at 200 Pa Intake/Exhaust (m³/h)	Air Flow at 300 Pa Intake/Exhaust (m³/h)	Net Weight with wall thickness of 1000mm (kg)
FC-RBV-31-D150-OW	270	Φ260	510/470	720/680	840/850	45
FC-RBV-31-D250-OW	552	Φ370	2000/2000	2800/2900	3500/3600	115
FC-RBV-31-D350-OW	714	Φ490	3250/2900	5000/4500	6200/5500	268

ii. Casted in concrete wall with valve base block surface mounted (Type FC-RBV-31-IW)



MODEL	A (mm)	B (mm)	C (mm)	Wmin (mm)	Net Weight with the minimum wall thickness (kg)
FC-RBV-31-D150-IW	Φ 390	Φ 450	Φ 270	205	24
FC-RBV-31-D250-IW	Φ 652	Φ 712	Φ 380	355	60
FC-RBV-31-D350-IW	Φ 760	Φ 820	Φ 500	455	145

iii. Duct connected (Type FC-RBV-31-D)



MODEL	A(mm)	B(mm)	C(mm)	Net Weight (kg)
FC-RBV-31-D150-D	270	Φ260	Φ290	32
FC-RBV-31-D250-D	552	Φ370	Φ520	93
FC-RBV-31-D350-D	714	Φ490	Φ600	238

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