

## 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 ]**

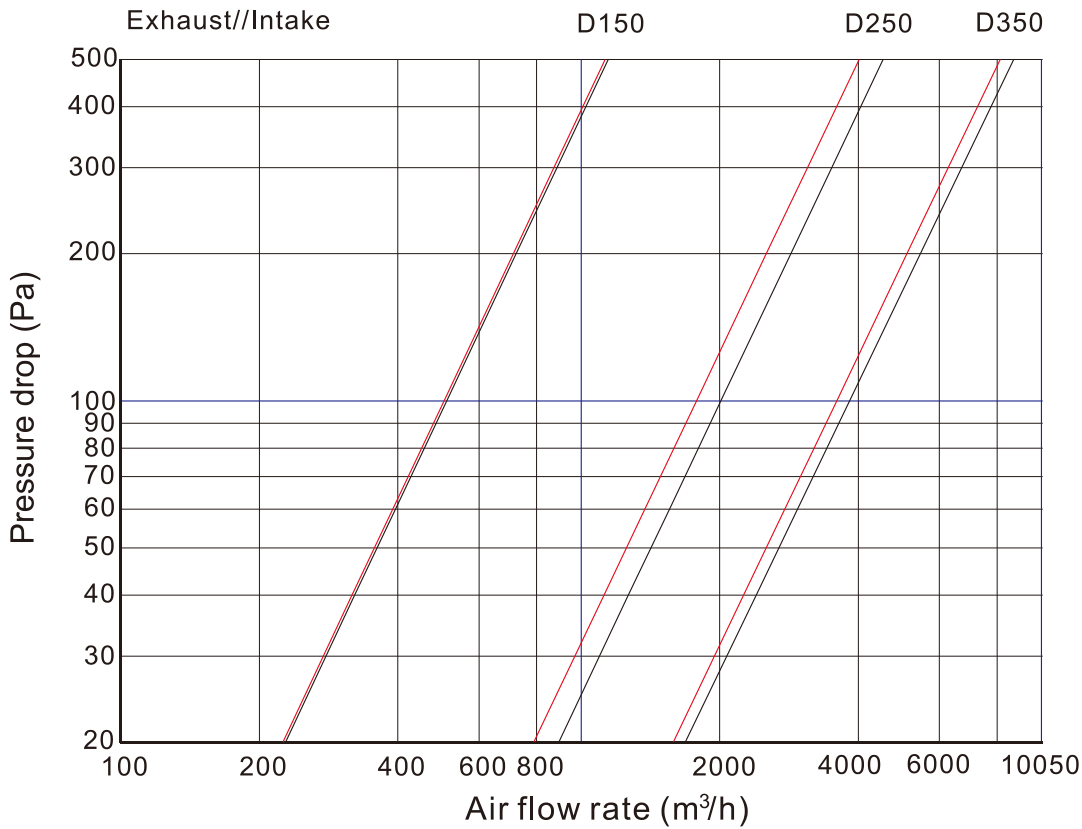
ATO PN: FCRBV31-[A]-[B]-[C]-[D]

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 ]**

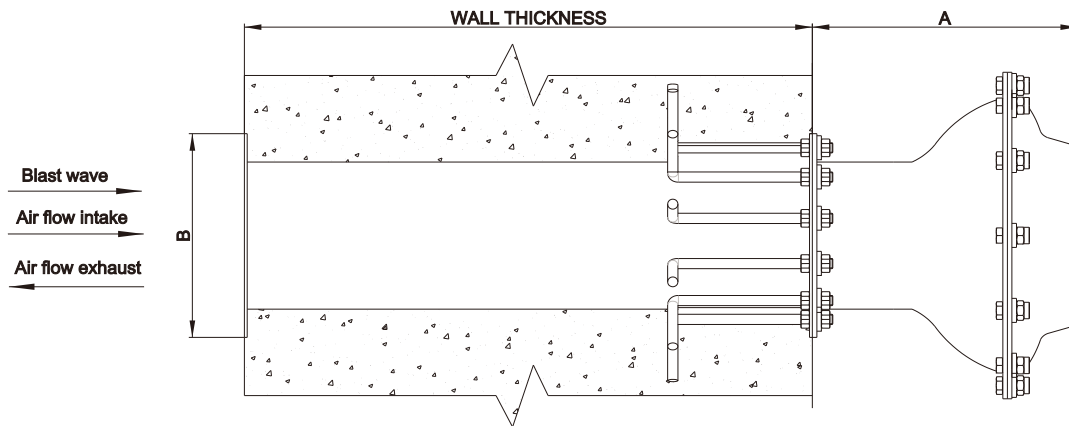
Designed peak pressure: >20 bar peak pressure reflected  
 Designed blast duration: >30 ms  
 Impulse block rate: >99% (20 bar reflected/30ms)  
 High temperature resistance: >40 mins at 300°C  
 Certification: Product is type tested by VTT, Finland

**[Air Flow vs Pressure drop ]**



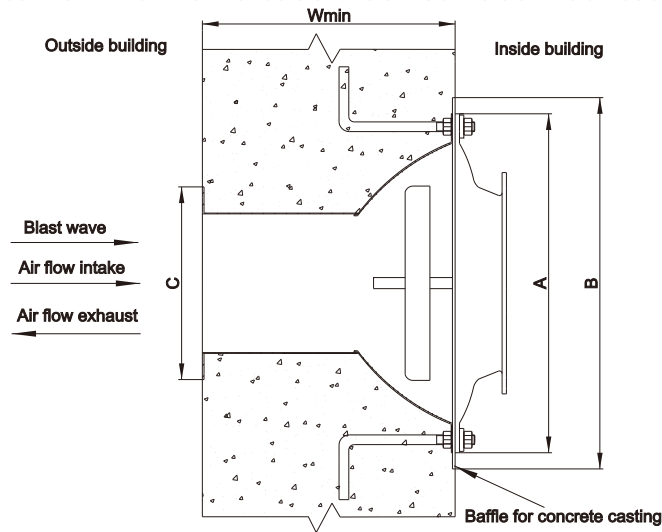
**[ Installation types and size ]**

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



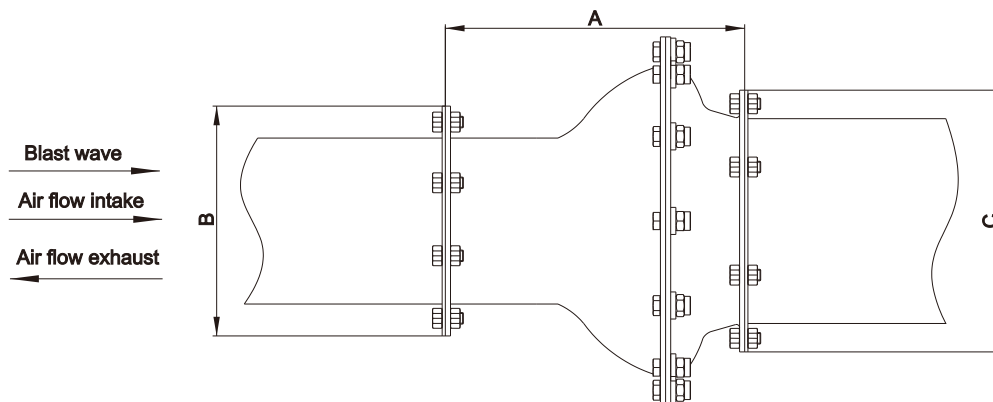
MODEL	A (mm)	B (mm)	Air Flow at 100 Pa Intake/Exhaust (m³/h)	Air Flow at 200 Pa Intake/Exhaust (m³/h)	Air Flow at 300 Pa Intake/Exhaust (m³/h)	Net Weight with wall thickness of 1000mm (kg)
FC-RBV-31-D150-OW	270	Φ260	510/500	720/710	880/870	45
FC-RBV-31-D250-OW	445	Φ360	2000/1800	2900/2600	3500/3100	115
FC-RBV-31-D350-OW	550	Φ460	3800/3600	5500/5100	6700/6300	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	210	24
FC-RBV-31-D250-IW	Φ 638	Φ 698	Φ 370	330	60
FC-RBV-31-D350-IW	Φ 792	Φ 852	Φ 470	370	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	Φ 260	Φ 290	32
FC-RBV-31-D250-D	445	Φ 360	Φ 420	93
FC-RBV-31-D350-D	550	Φ 460	Φ 540	238

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