



BLAST DAMPERS – MZS | UZS

Blast Protection

BLAST DAMPERS MZS UZS NOV 2025 V1

MZS | UZS Blast Dampers

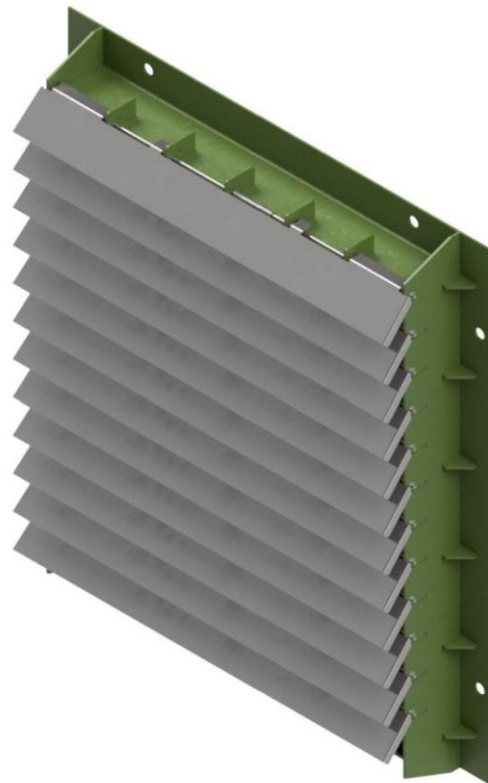
MZS and UZS type blast dampers are normally open devices designed for protection of ventilation openings and internal space from destructive blast pressure effects. Blast dampers allow the air movement into and out of the protected space and automatically closes under the pressure of a blast wave, blocking the ventilation opening to provide protection against the penetration of the blast waves into the shelter.

MZS and UZS can be installed independently or integrated with special adaptors for connecting to the duct, external installation and more.

MZS Blast Damper



UZS-1 Blast Damper



Selection Criteria for MZS and UZS and Special Cases

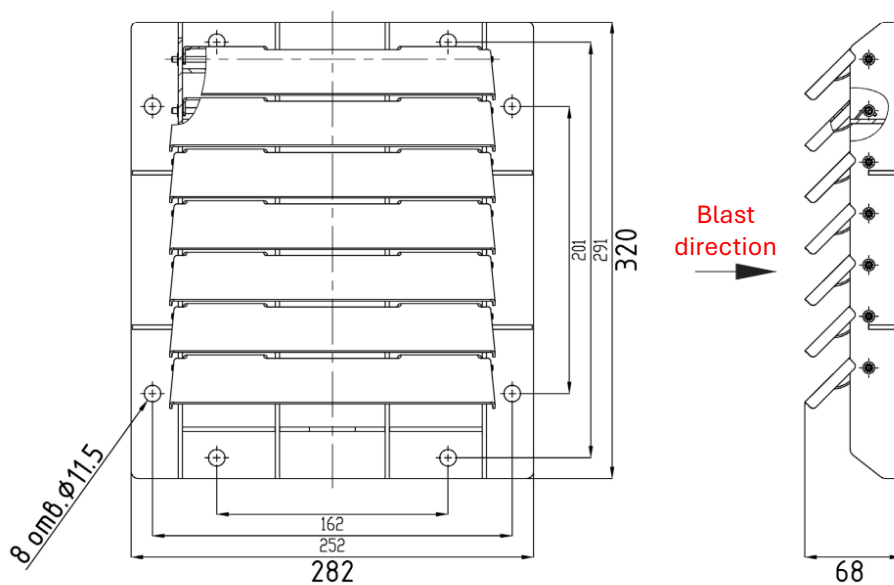
- **MZS / UZS-1** - blast damper only
- **MZS Assembly** - MZS blast damper with special metal casing for external installation and 200mm duct connection
- **UZS-8** - UZS-1 blast damper installed in special metal casing and can be used as an emergency hatch.
- **UZS-25** - 3 units of UZS-1 blast dampers installed in a special metal frame and can be used as an emergency hatch/door.

Type	MZS	MZS Assembly	UZS-1	UZS-8	UZS-25
Blast rating (kPa)	30-1000				
Nominal airflow (m3/h)	1500		8000		25000
Pressure drop (Pa)	50-250		150-210		
Length (mm)	321	385	649	749	2197
Width (mm)	282	345	595	695	815
Thickness (mm)	82	305	146	215	360
Weight (kg)	5	20	25	40	200
Expansion chamber volume (m3)	0.5		2		6
Operating temperature (°C)	0 - 60				

Blast dampers MZS and UZS are effective with blast wave pressure of over 30 kPa. For reducing the shock wave force after the dumper, it is required to use expansion chambers (air duct sections) of not less the recommended volume.

MZS Blast Damper

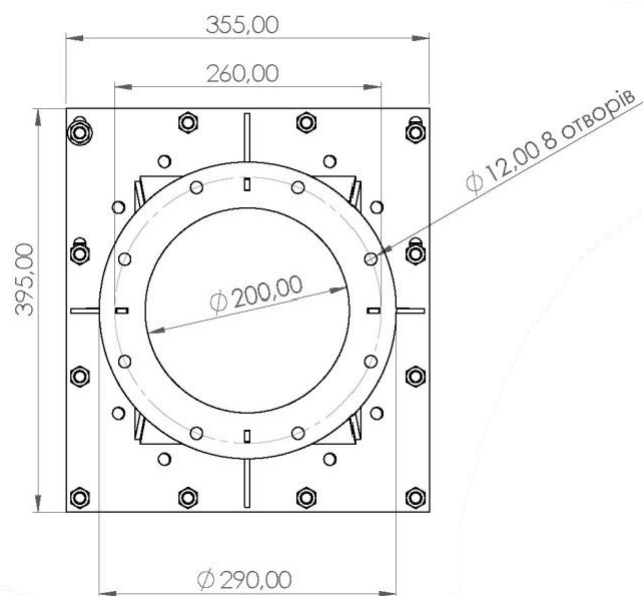
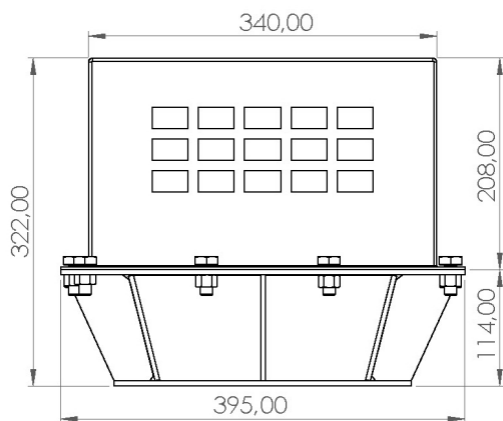
MZS blast damper is normally open device designed for automatic action protection of ventilation openings and internal space from destructive blast pressure effects.



MZS Assembly

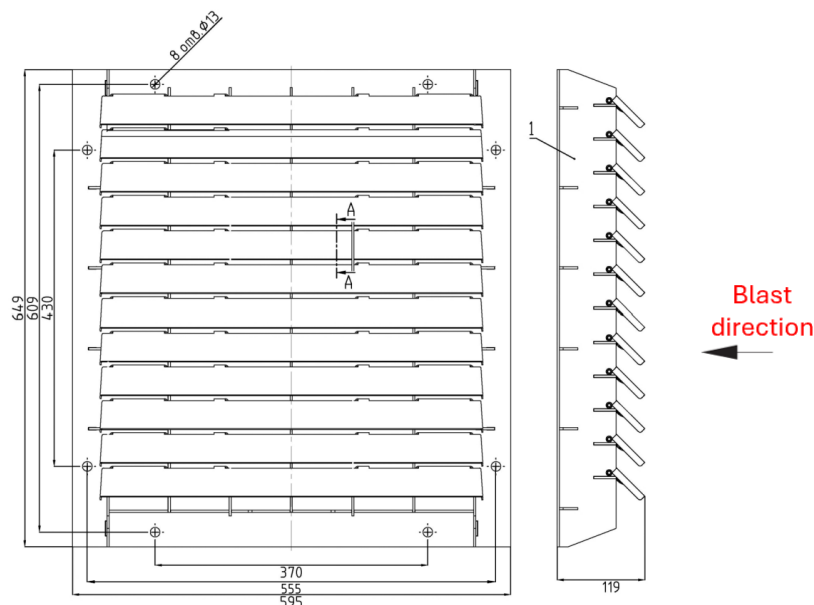
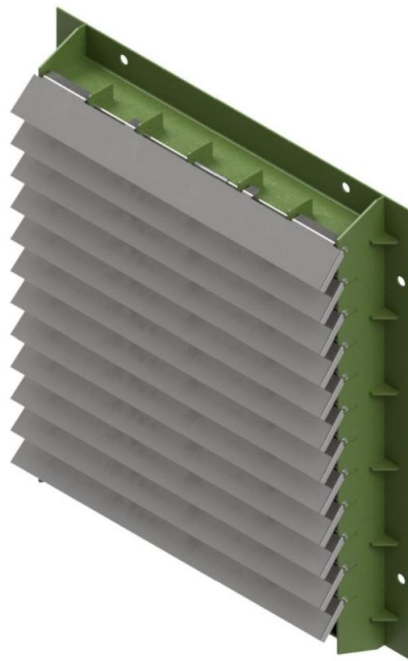
MZS assembly includes MZS blast damper installed in the special metal casing that includes flange with opening of 200 mm diameter.

The steel casing protects the MZS blast damper from mechanical and weather damages with option to install electric heating wire preventing freezing.



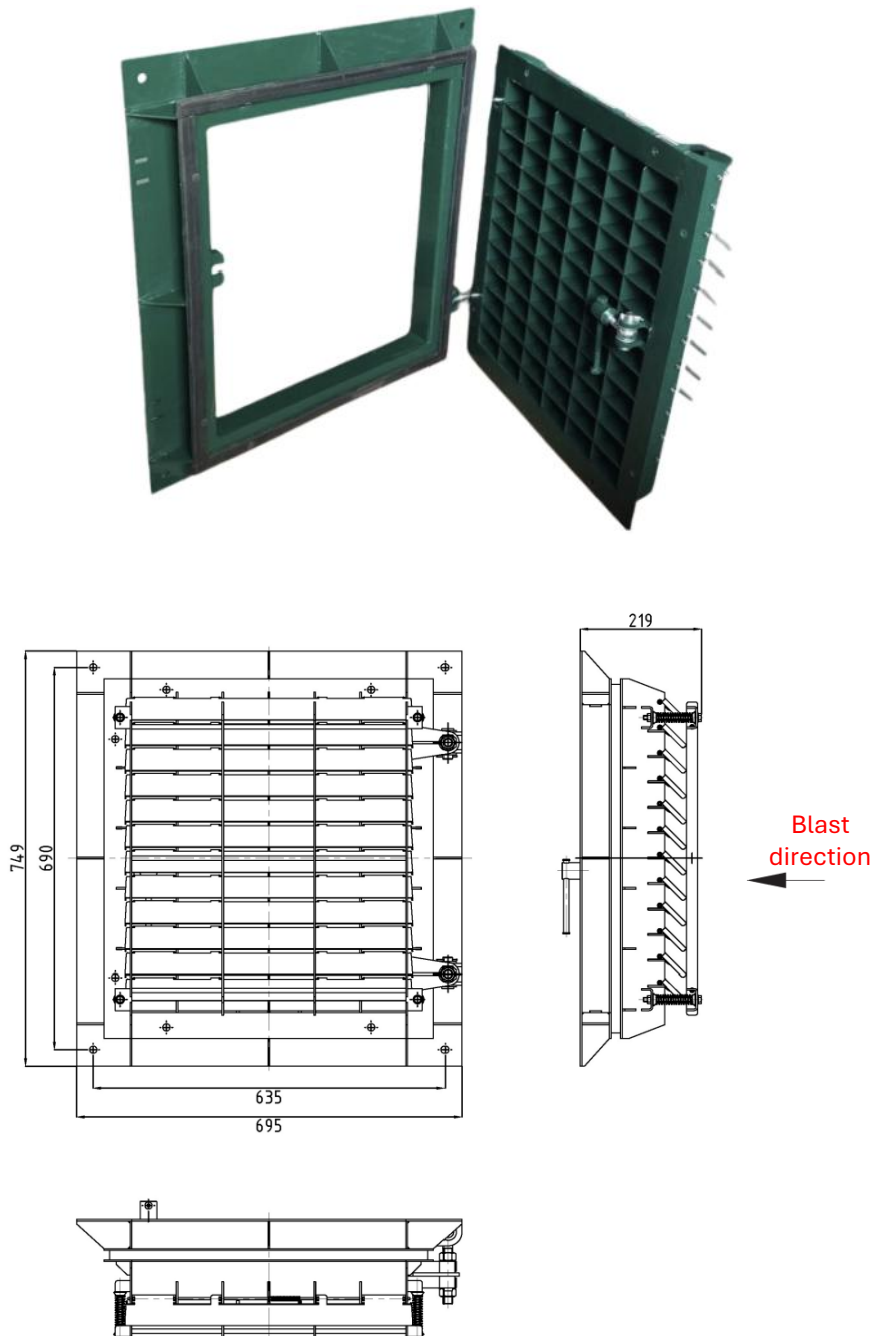
UZS-1 Blast Damper

MZS blast damper is normally open device designed for automatic action protection of ventilation openings and internal space from destructive blast pressure effects.



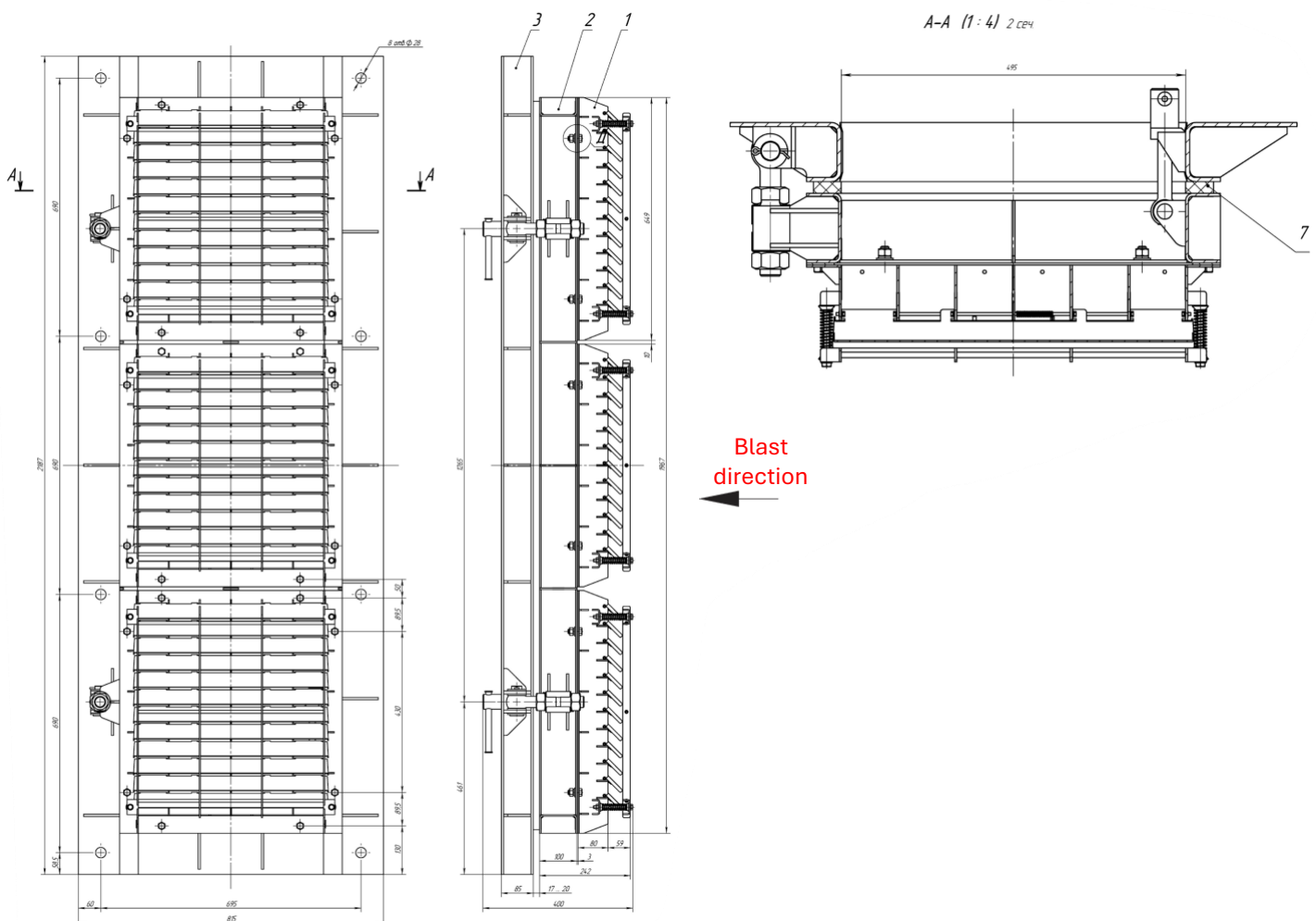
UZS-8 Blast Damper Combined with Hatch

UZS-8 is an assembly that includes UZS-1 blast damper installed in the special metal casing and can be used as an emergency hatch.



UZS-25 Blast Dampers Combined in a Frame with Emergency Hatch

UZS-25 is an assembly that includes 3 units of UZS-1 blast dampers which installed in a special metal frame and can be used as an emergency hatch/door.



Special Cases MZ-2 and UZ-3 for MZS and UZS-1 Blast Dampers

MZ-2 and UZ-3 cases can be used for placing the MZS and UZS-1 blast dampers on vertical / horizontal air ducts (side opening).

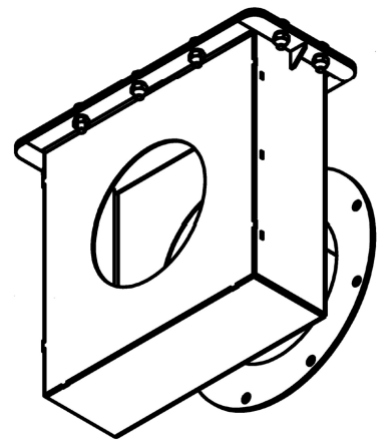
The case should be installed on the air duct at the way that ensuring access to the case and the cover, allowing removal and installation of the blast damper. The case includes a body and a removable cover. The blast dampers MZS and UZS are installed in the box. The cover securely and hermetically closes the box. The dampers can be installed so that the direction of the blast wave is in the direction of the damper blades. The UZ-3 boxes are similar in principle to the MZ-2, but differ in size. The diameter of the air duct for the MZ-2 is up to 325 mm and for the UZ-3 up to 630 mm.



MZ-2 Case



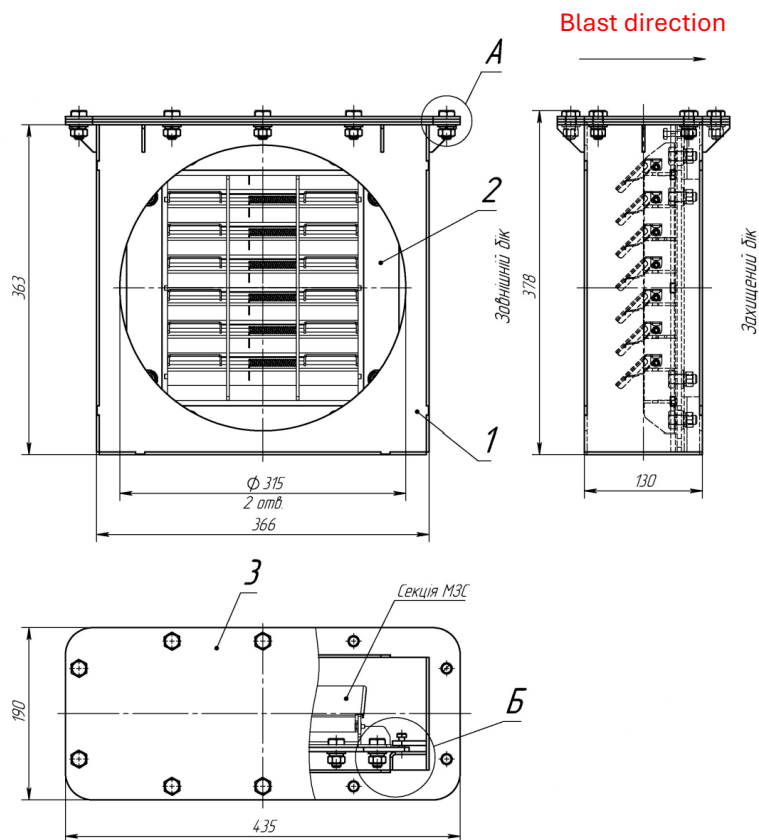
UZ-3 Case



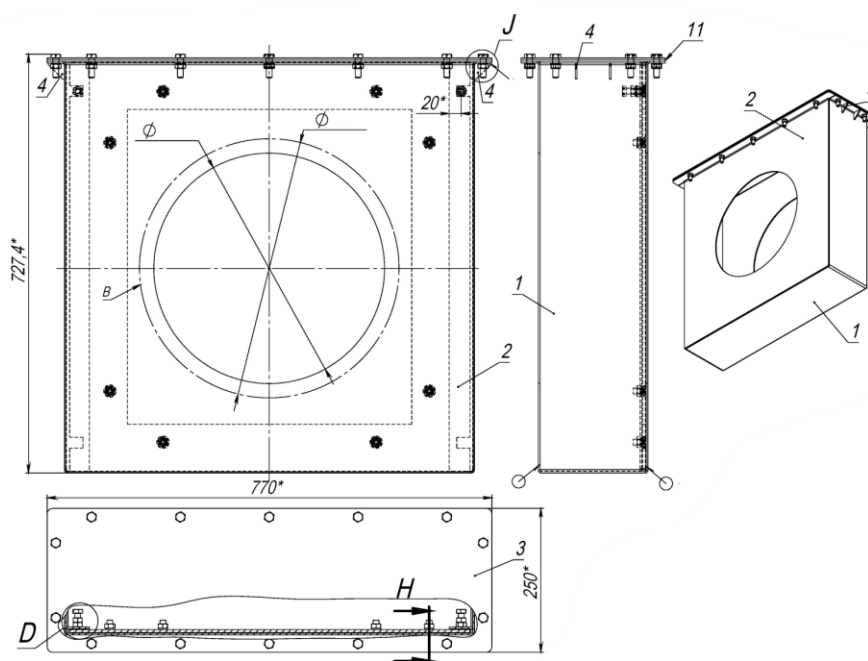
**Special
Configurations**

Special Cases MZ-2 and UZ-3

MZ-2 Case



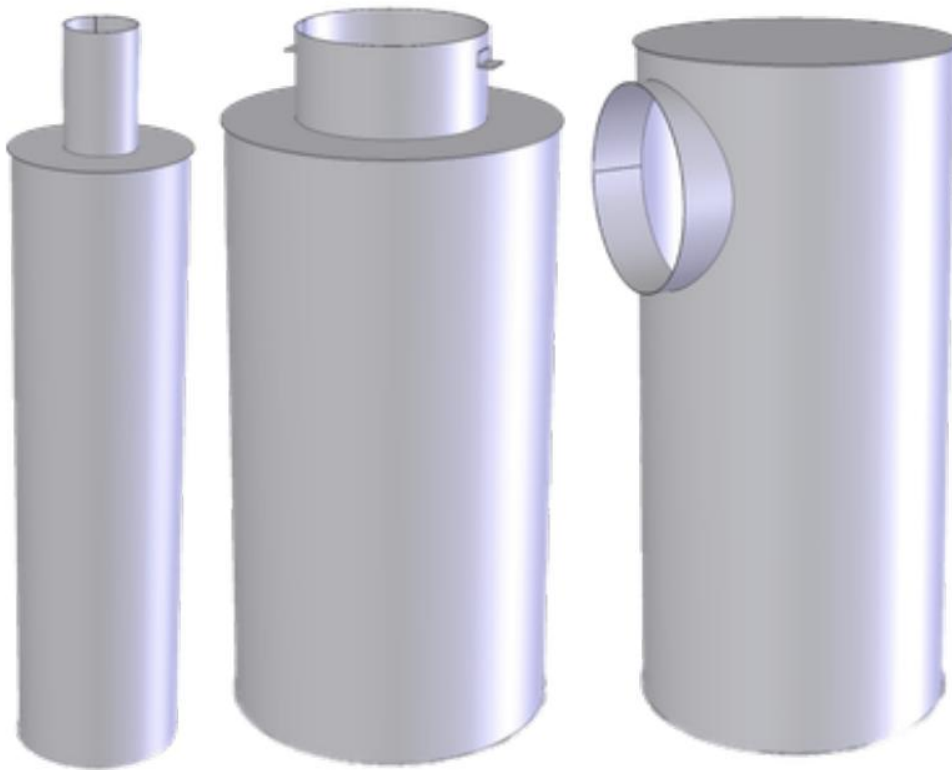
UZ-3 Case



Expansion Chambers RK

Expansion chambers RK type are used to reduce the blast wave pressure after the blast dampers. Our range includes three types of metal expansion chambers: RK-0.5 (volume 0.5 m³); RK-2-I (volume 2 m³, air inlet from the side) RK-2-II (volume 2 m³, air inlet from the top). On request, it is possible to manufacture the RCF-6 product with built-in prefilters.

Other spaces can be used as expansion chambers - reinforced concrete rooms, sections of the air duct, and other.



Expansion chambers RK-0.5; RK-2-II and RK-2-I (from left to right)



Atmas Group is a Finland-based global supplier of products, technologies, project support services and complete solutions in the areas of civil defense shelters and protected spaces, facilities reinforcement against CBRN, blast, ballistic, forced entry and EMP threats, as well as security, safety and emergency response.

Atmas is trusted by customers and partners around the world providing a unique combination of solutions “under one roof”, with a focus on advanced technologies, product customization, uncompromised service and comprehensive project support.

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