



PAXAA Multi-Cyclone, PX-MC

Product Catalog



PAXAA Multi-Cyclone, PX-MC

Dry Centrifugal Collector

Areas of Use

PAXAA Multi-Cyclone is a highly efficient multi-cyclone unit that is extra useful where high-degree dust separation is required. The unit can be used for fine or coarse dust as well as with extremely tearing dust types. Suitable areas of use are for cleaning gases from industrial processes such as earth and gravel processing, foundries, steel industries as well as cleaning residual gas from furnace plants. The PAXAA Multi-Cyclone is constructed in parallel-connected mini cyclones and is manufactured in seven sizes. The number of mini cyclones is variable within each size. The PAXAA Multi-Cyclone series can handle gas flows from 600 to 63,000 m³/h and maximum temperatures of 300°C.

Construction—Function

PAXAA Multi-Cyclone consists of a housing containing a quantity of collecting tube assemblies, each an individual centrifugal dust collector. Dust laden gas enters the top of the collecting tube through the inlet guide vanes. These vanes impart a smooth, fast spiral to the gas, setting up a highly centrifugal action with a minimum of turbulence and erosion. As the gas descends in a cyclonic pattern, the dust is forced by centrifugal action against the wall of the collecting tube and gravitates to the bottom where it is discharged. A vortex forms at the bottom of the collecting tube and the cleaned gas makes an inner whirl up into the outlet tube. Optional outlet recovery vanes help straighten the gas flow to reduce draft loss. Careful attention to housing design details such as inlet and outlet proportions, and collecting tube spacing



assures uniform gas distribution and proper flow to each individual collecting tube for maximum design efficiency. The cyclone housing is constructed from steel plating, and contains doors for inspection and cleaning. The in- and outlets are flanged. The frame is constructed from stable angle profiles, and can also be delivered with non-standard heights if necessary.

Assembly—Delivery

The upper unit of the dust separator is delivered with the cyclones pre-assembled. The lower unit and the frame are delivered separately, and assembly is conducted on site. The units are delivered without insulation; this is best done on spot in combination with other insulation work.

Note! During assembly ensure that the connection point between the upper and lower units is completely sealed.



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Features

Features:

Tube Diameters and Efficiency

Theoretically, high-collection efficiencies are achieved with smaller diameter tubes, since the centrifugal force applied to the dust particles increases as the tube diameter decreases. Three other major design factors also significantly affect collection efficiency, namely proper gas distribution, draft loss, and particle size/specific gravity. PAXAA engineering is available for assistance in determining tube size.

Heavy-Duty Construction

All components are designed for rugged service by an experienced collector team totally familiar with collector operation. Each application is individually evaluated based on the severity of service and previous field experience.

Inlet Guide Vanes

The inlet guide vanes are separately cast and are held in place by support on the gas outlet tube. They fit securely in place inside the collecting tube keeping the outlet tube centered. Inlet guide vanes are designed to give the gas maximum centrifugal action on its spiraling path down the tube toward the dust discharge cone.

Outlet Tubes

Outlet tubes are held in place at the lower end by the inlet guide vane and welded at the top to the top tube sheet. Their purpose is to deliver the cleaned gas from the collecting tubes to the outlet chamber. The abrasive gases on the outside of these tubes cause greater wear than from the inside.

Access Doors

This feature is constructed with quick open design, that requires no special tools to open. These doors can be located in any direction.

Outlet Recovery Vanes

Recovery vanes are used at the lower end of the gas outlet tube in certain applications. These vanes are used to recover the rotational energy of the exiting gas, thereby increasing the total capacity of each collecting tube. Recovery vanes are not recommended where the incoming gas has a characteristic, such as heavy oil or bark-fired combinations. Outlet recovery vanes have the efficiency benefits of permitting a smaller collector for a given gas flow.

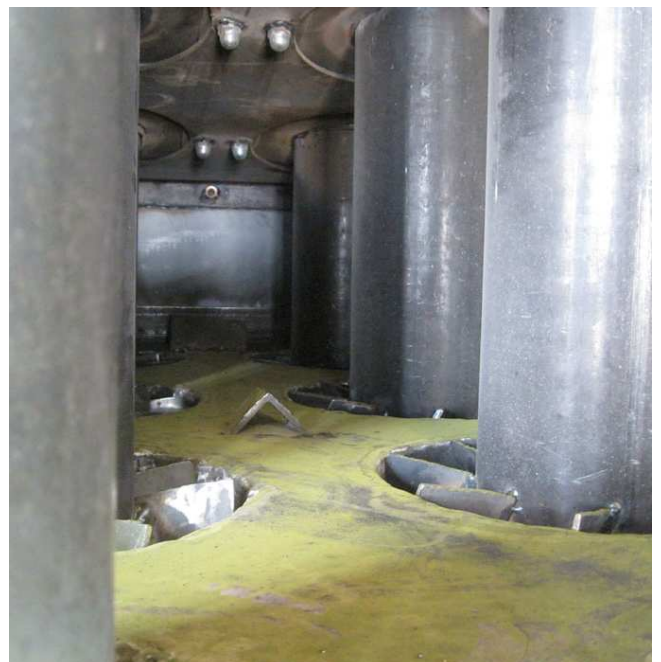
Dust Expulsion

The multi-cyclone unit's dust outlet can be connected to a

- rotary valve unit, for transport into a screw conveyor or pneumatic transport system
- dust damper, fitting with dust container

Accessories

- Dust damper
- Dust container
- Rotary valve unit

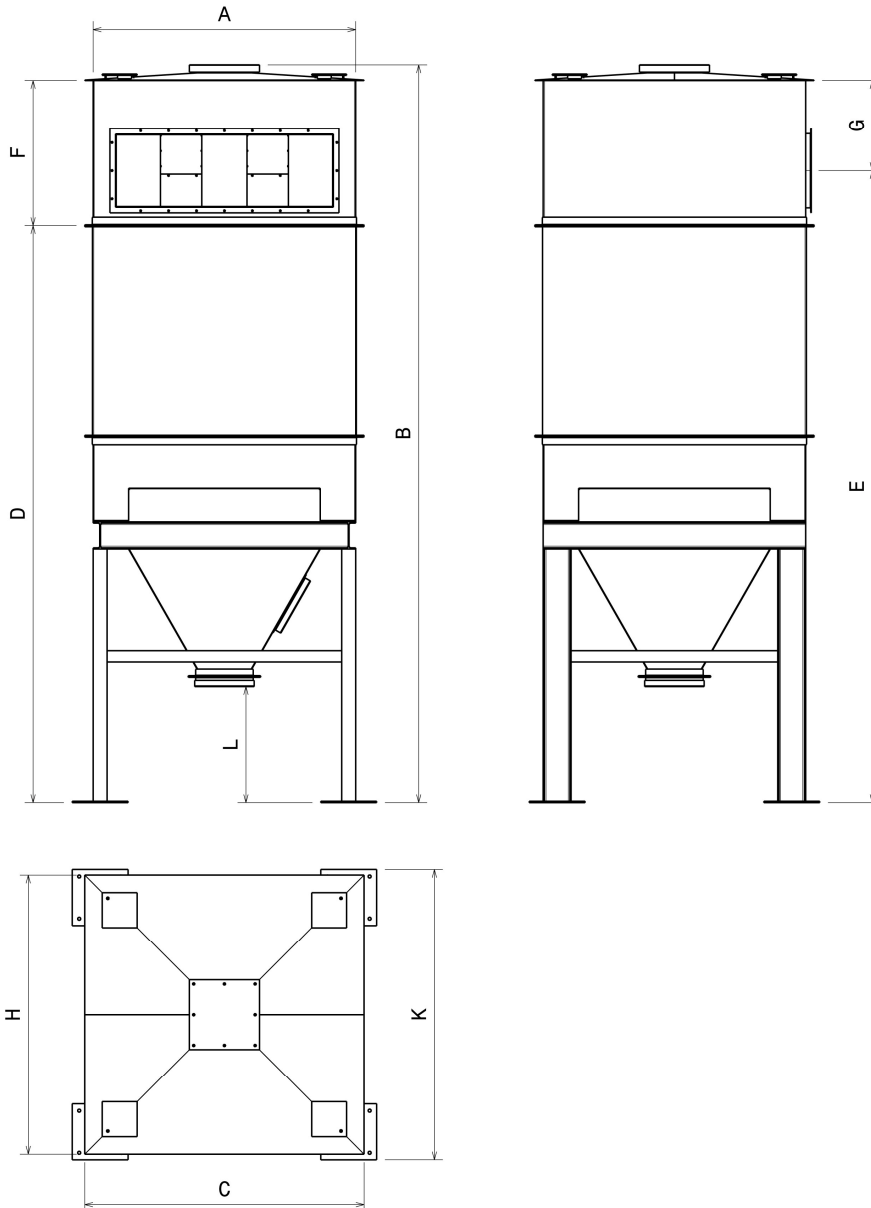




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Measures

Measures



Size	A	B	C	D	E	F	G	H	K	L
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
PX-MC1	870	3025	882	2355	2580	325	250	770	894	830
PX-MC2	1210	3440	1222	2645	2905	450	340	1110	1234	830
PX-MC3	1550	3835	1562	2940	3240	550	400	1450	1574	830
PX-MC4	1890	4360	1902	3240	3590	775	575	1790	1914	830
PX-MC5	2230	4825	2242	3530	3930	950	700	2130	2254	830
PX-MC6	2230	5360	2250	4060	4465	955	700	2788	2168	830
PX-MC7	2230	5985	2250	4685	5090	955	700	3468	2148	830

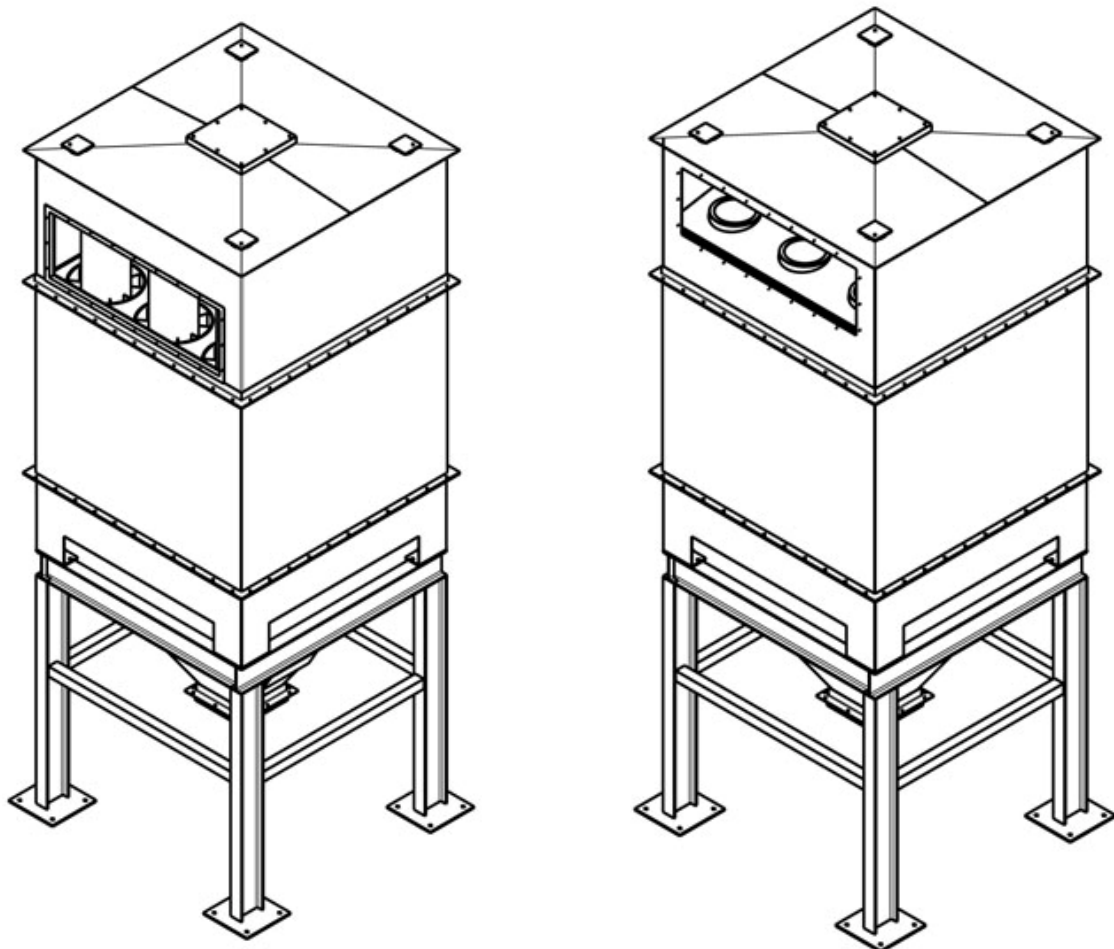


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Technical Data

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Size	Number of modules		Maximum gas flow (m ³ /h)		Weight with max. no. of modules (kg)
	min.	max.	Hard-tearing dust	Non-tearing dust	
PX-MC1	1	4	2,800	4,200	420
PX-MC2	5	9	6,300	9,450	790
PX-MC3	10	16	11,200	16,800	1320
PX-MC4	17	25	17,500	26,250	2340
PX-MC5	26	36	25,200	37,800	3000
PX-MC6	37	48	33,600	50,400	4200
PX-MC7	49	60	42,000	63,000	5000



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