KleanAire

filtration solutions

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Enhancing your machine performance

An ISO/TS16949 、ISO9001、ISO14000 Certified Company

Products tested by independent institutions in accordance to ISO 5011 : 2000

Version-April.2024

-Advance air filtration solutions

Hangzhou KleanAire Solutions Co. Ltd has been in the business of design, manufacture and sale of centrifugal precleaners since 2006 and was the pioneer in the Chinese market to introduce the concept of centrifugal air precleaners.

Her products are used by most Chinese OEMs and are also gaining acceptance by many international customers.

KleanAire Precleaners are manufactured to international standards by a team of dynamic engineers with recognized credentials and she has also been awarded ISO/TS 16949,ISO 9001:2000 & ISO 14001 for her Quality Management System in design & manufacturing of air precleaners.

Hangzhou KleanAire Solutions Co.,Ltd

Benefits & Features

- Remove up to 90% of impurities, rain, debris, dust and dirt from intake air before the air reaches the filter element
- Greatly extend filter element life by up to 2-8 times
- Reduce engine wear and minimize costly downtime
- Prolong engine & turbocharger life
- Improve fuel economy
- Improve engine performance and reduce operating cost
- Self powered by the engine's air intake
- Virtually require no maintenance
- Polymer galvanized steel housing to endure harshest environment
- Works in all weather conditions

How It Works

Tested by independent institutions in accordance to ISO 5011 : 2000

How to determine precleaner size

CFM FORMULA

4Cycle Engines

$$\frac{\text{RPM X CID X Vol.efficiency}}{3456} = \text{CFM}$$

CMM FORMULA

4Cycle Engines

$$\frac{\text{RPM X L X Vol.efficiency}}{2000} = \text{CMM}$$

Volumetric Efficiency

Diesel Engines		Gasoline Engines	
Naturally Aspirated	=0.85	Up to 2500RPM	=0.80
Turbocharged	=1.60	2500 to 3000RPM	=0.75
Turbocharge- aftercooled	=1.85	3000 to 4000RPM	=0.70

CFM – Cubic Feet Per Minute
RPM – Revolutions Per Minute
CMM – Cubic Meters Per Minute
CID – Cubic Inch Displacement
L – Liters

Conversion Formula For Metric Displacement to CID:
Cubic Centimeters(cm^3) x 0.06102=CID
Displacement in Liters x 61.02 =CID
Conversion of CFM to CMM multiply by 0.0283

(Please contact us for 2 cycle engines)

Applications

- Construction Equipment
- Mining Equipment
- Generators
- Road Maintenance Equipment
- Cement Plants
- Air Compressors
- Material Handling Equipment
- Agriculture,Farm Equipment
- Street Sweepers
- Dump Trucks
- Buses
- Logging & Forestry Equipment
- Equipment operating in extreme & dusty environment

Top down Series

Technical Specifications

Model	Part No.	Airflow Range		A(mm)	B(mm)	ΦC(mm)	D(mm)	Weight (Kg)
		CFM	CMM					
KA20–3	902001	50–250	1.4–7.1	242	263	77	38	1.4
KA20–4	902002	50–250	1.4–7.1	242	263	102	38	1.4
KA30–3	903001A	50–250	1.4–7.1	230	265	77	38	1.5
KA30–4	903002A	50–250	1.4–7.1	230	265	102	38	1.5
KA33–3	903301	120–300	3.4–8.5	225	285	77	45	2.4
KA33–4	903302	120–300	3.4–8.5	225	285	102	45	2.5
KA33–4.5	903303	120–300	3.4–8.5	225	285	114	45	2.5
KA35–4.5	903500	240–420	6.8–11.9	240	327	114/102	45	2.9
KA35–5	903501	240–420	6.8–11.9	240	327	127	45	3.0
KA35–6	903502	240–420	6.8–11.9	240	327	152	45	3.1
KA35–7	903503	240–420	6.8–11.9	240	327	178	45	3.1
KA40–4.5	904002	230–530	6.5–15.0	326	393	114	45	2.6
KA40–5.2	904003	230–530	6.5–15.0	326	393	132	45	2.7
KA40–6	904004	230–530	6.5–15.0	326	393	152	45	2.6
KA50–4.5	905001	400–750	11.3–21.2	310	375	114/102	41	5.2
KA50–5	905002	400–750	11.3–21.2	310	415	127	58	5.4
KA50–5.5	905005	400–750	11.3–21.2	310	415	140/132	58	5.4
KA50–6	905003	400–750	11.3–21.2	310	415	152	58	5.5
KA50–7	905004	400–750	11.3–21.2	310	415	178	58	5.5
KA50–9	905006	400–750	11.3–21.2	310	415	229	58	5.5
KA60–5	906002	410–770	11.6–21.8	372	418	127	58	3.2
KA60–6	906003	410–770	11.6–21.8	372	418	152	58	3.3
KA60–7	906004	410–770	11.6–21.8	372	418	178	58	3.6
KA70–6	907001	750–1350	21.2–38.2	365	443	152	45	7.5
KA70–7	907002	750–1350	21.2–38.2	365	443	178	45	7.5
KA70–8	907003	750–1350	21.2–38.2	365	443	203	45	7.6
KA70–8.5	907005	750–1350	21.2–38.2	365	443	216	45	8.0
KA70–9	907004	750–1350	21.2–38.2	365	443	229	45	8.2

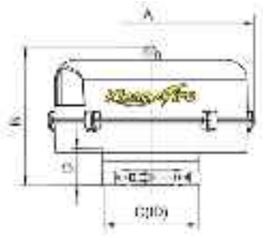
• Please refer to Technical Drawings for detailed dimensions.

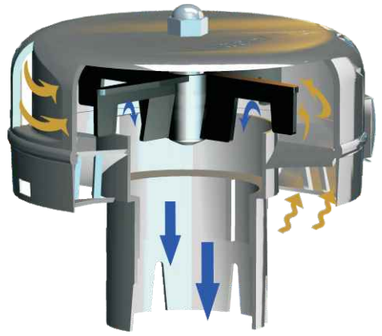
Low Profile Series

KA10/ KA12/ KA14

KA12N /KA16/KA17N/KA18

KA15/ KA17/ KA19





How It Works

- Contaminated air enters from bottom of the precleaner.
- It flows through specially designed,static angled vanes causing the air to spin.
- As air spins,a centrifugal force is created and it separates dust and contaminants from the air stream.
- The swirling air drives a high velocity rotor that acts as a sweeper.
- The rotor evacuates the dirt and contaminants from the discharge port at the side of the precleaner.
- Only purified air flows into the filter element.

Technical Specifications

Model	Part No.	Airflow Range		A(mm)	B(mm)	ΦC(mm)	D(mm)	Weight (Kg)
		CFM	CMM					
KA10	901000	5–90	0.1–2.5	137	109	51	25	0.2
KA12N–3	9012N01	50–200	1.4–5.7	196	170	77	36	0.7
KA12–3	901200	50–200	1.4–5.7	197	132	77	36	0.5
KA12–3.5	901201	50–200	1.4–5.7	197	132	90	36	0.4
KA14–4	901401	175–360	5.0–10.2	258	168	102	45	1.3
KA14–4.5	901402	175–360	5.0–10.2	258	168	114	45	1.4
KA15–4.5	901501	240–500	6.8–14.2	275	242	114/102	50	3.6
KA15–5	901502	240–500	6.8–14.2	275	242	127	50	3.7
KA16–5	901602	240–550	6.8–15.6	291	239	127	50	1.5
KA16–6	901603	240–550	6.8–15.6	291	239	152	43	1.6
KA17–5	901701	400–750	11.3–21.2	295	253	127	45	3.5
KA17–6	901702	400–750	11.3–21.2	295	253	152	45	3.6
KA17N–6	9017N02	470–950	13.3–26.9	350	250	152	45	1.8
KA17N–7	9017N01	470–950	13.3–26.9	350	253	178	50	1.9
KA18–6	901801	760–1300	21.5–36.8	400	347	152	50	3.5
KA18–7	901802	760–1300	21.5–36.8	400	324	178	50	3.5
KA19–8	901900	1300–1800	36.8–50.9	440	272	203	50	9.3
KA19–9	901901	1300–1800	36.8–50.9	440	232	229	50	8.9

• Please refer to Technical Drawings for detailed dimensions.

Horizontal /In Hood Mounting Series

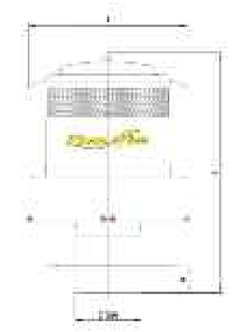
KA33H/ KA35H/ KA50H/ KA70H

Technical Specifications

Model	Part No.	Airflow Range		A(mm)	B(mm)	ΦC(mm)	D(mm)	Weight (Kg)
		CFM	CMM					
KA33H–3	903301H	120–300	3.4–8.5	225	195	77	45	2.1
KA33H–4	903302H	120–300	3.4–8.5	225	195	102	45	2.2
KA33H–4.5	903303H	120–300	3.4–8.5	225	195	114	45	2.2
KA35H–4.5	903500H	240–420	6.8–11.9	238	223	114/102	45	2.4
KA35H–5	903501H	240–420	6.8–11.9	238	223	127	45	2.5
KA35H–6	903502H	240–420	6.8–11.9	238	223	152	45	2.5
KA35H–7	903503H	240–420	6.8–11.9	238	223	178	45	2.6
KA50H–4.5	905001H	400–750	11.3–21.2	310	268	114/102	41	4.2
KA50H–5	905002H	400–750	11.3–21.2	310	308	127	58	4.4
KA50H–5.5	905005H	400–750	11.3–21.2	310	308	140/132	58	4.4
KA50H–6	905003H	400–750	11.3–21.2	310	308	152	58	4.5
KA50H–7	905004H	400–750	11.3–21.2	310	308	178	58	4.5
KA70H–6	907001H	750–1350	21.2–38.2	374	315	152	45	6.2
KA70H–7	907002H	750–1350	21.2–38.2	374	315	178	45	6.2
KA70H–8	907003H	750–1350	21.2–38.2	374	315	203	45	6.3
KA70H–9	907004H	750–1350	21.2–38.2	374	315	229	45	6.3

Flanged Series

KA33F/ KA35F/ KA50F/ KA70F



Technical Specifications

Model	Part No.	Airflow Range		A(mm)	B(mm)	ΦC(mm)	D(mm)	Weight (Kg)
		CFM	CMM					
KA33F–3	903301F	120–300	3.4–8.5	225	338	82	50	3.4
KA33F–4	903302F	120–300	3.4–8.5	225	338	106	50	3.4
KA33F–4.5	903303F	120–300	3.4–8.5	225	338	119	50	3.5
KA35F–4.5	903500F	240–420	6.8–11.9	240	380	119	50	4.0
KA35F–5	903501F	240–420	6.8–11.9	240	380	131	50	4.1
KA35F–6	903502F	240–420	6.8–11.9	240	380	157	50	4.2
KA35F–7	903503F	240–420	6.8–11.9	240	380	182	50	4.3
KA15F–4.5	901501F	240–500	6.8–14.2	275	295	119	50	4.4
KA50F–4.5	905001F	400–750	11.3–21.2	310	428	119	50	6.3
KA50F–5	905002F	400–750	11.3–21.2	310	468	131	50	6.5
KA50F–5.5	905005F	400–750	11.3–21.2	310	468	144	50	6.6
KA50F–6	905003F	400–750	11.3–21.2	310	468	157	50	6.6
KA50F–7	905004F	400–750	11.3–21.2	310	468	182	50	7.7
KA70F–6	907001F	750–1350	21.2–38.2	365	496	157	50	9.0
KA70F–7	907002F	750–1350	21.2–38.2	365	496	182	50	9.3
KA70F–8	907003F	750–1350	21.2–38.2	365	496	207	50	9.4
KA70F–9	907004F	750–1350	21.2–38.2	365	496	232	50	9.6
KA19F–8	901900F	1300–1800	36.8–50.9	440	322	203	47	11.1
KA19F–9	901901F	1300–1800	36.8–50.9	440	282	229	47	10.6

• Please refer to Technical Drawings for detailed dimensions.

Agricultural Application Series

KA12A/KA14A/KA16A/KA18A

KA30A

KA33A / KA35A/KA70A

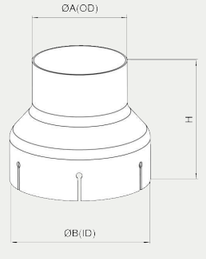
Technical Specifications

Model	Part No.	Airflow Range		A(mm)	B(mm)	Φ C(mm)	D(mm)	Weight (Kg)
		CFM	CMM					
KA12A–3	901200A	50–200	1.4–5.7	197	318	77	50	1.5
KA14A–4	901401A	175–360	5.0–10.2	258	323	102	45	2.3
KA14A–4.5	901402A	175–360	5.0–10.2	258	323	114	45	2.4
KA16A–6	901603A	240–550	6.8–15.6	291	239	153	43	1.7
KA18A–7	901802A	760–1300	21.5–36.8	400	667	178	45	6.8
KA30A–3	903001AA	50–250	1.4–7.1	230	305	77	38	1.3
KA30A–4	903002AA	50–250	1.4–7.1	230	305	102	38	1.4
KA33A–3	903301A	120–300	3.4–8.5	225	285	77	45	2.7
KA33A–4	903302A	120–300	3.4–8.5	225	285	102	45	2.7
KA33A–4.5	903303A	120–300	3.4–8.5	225	285	114	45	2.8
KA35A–4.5	903500A	240–420	6.8–11.9	240	335	114/102	45	3.4
KA35A–5	903501A	240–420	6.8–11.9	240	335	127	45	3.5
KA35A–6	903502A	240–420	6.8–11.9	240	335	152	45	3.5
KA35A–7	903503A	240–420	6.8–11.9	240	335	178	45	3.6
KA70A–7	907002A	750–1350	21.2–38.2	365	493	178	45	9.0

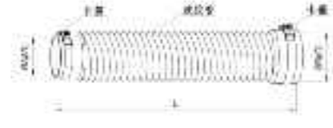
• Please refer to Technical Drawings for detailed dimensions.

Accessories For Precleaner

Metal Connector

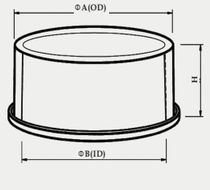


Air Hose



Forklift Adaptor

Rubber Adaptor



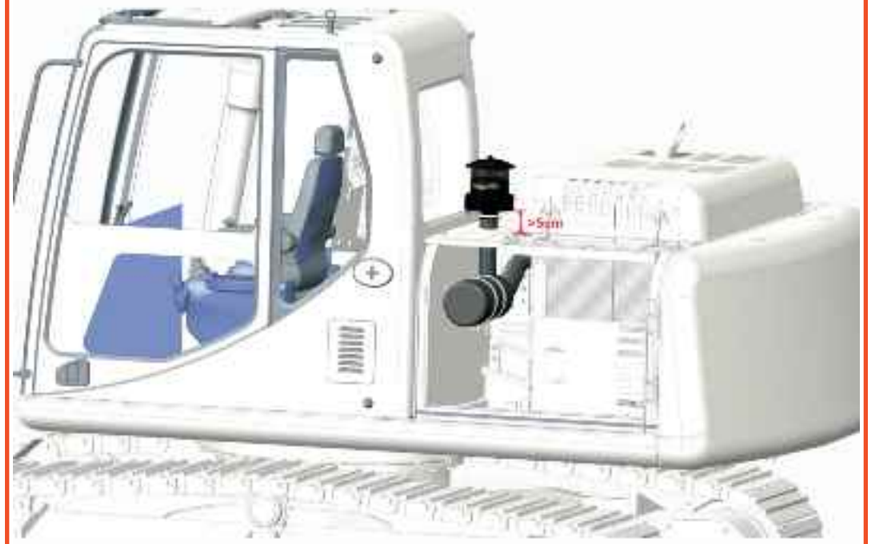
Accessories For Oil Bath Aircleaner

Mounting Bracket

Lower Mesh

• Please refer to Technical Drawings for detailed dimensions.

General Installation Instructions



1.The air precleaner is sized according to the engine airflow ratings and not according to the air intake pipe size.

2.The air precleaner must not be mounted flush against any surface of the equipment as clearance is needed for the discharge of debris,dirts, dust. A minimum clearance of 5 cm is recommended.

3.For optimum results, vac valves, rubber valves on the filter canister, air intake system should be properly sealed/closed to prevent contaminated air from by-passing the precleaner.

4.Hump hoses are strongly recommended for air precleaners installed in high vibration applications.

Maintenance Instructions

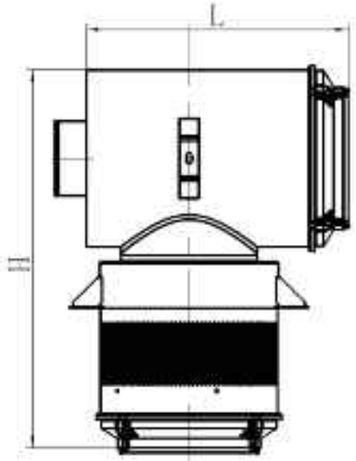
KleanAire precleaner are self-powered & self-cleaning and it virtually requires no maintenance. However, the discharge ports should be checked periodically to ensure that it is not plugged by debris, dirt, mud (especially in moist environment)

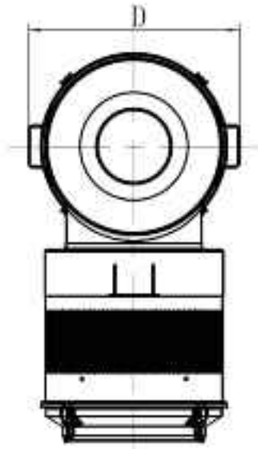
KleanAire Solutions Co.,Ltd is an ISO9001 certified company and products tested by independent institutions in accordance to ISO 5011:2000

Multi Stage Cyclonic Filtration System

How It Works

- Contaminated air is drawn through the mesh and travels through a cluster of cyclonic tubes.
- Centrifugal force is created in each tube that separates the heavier dust particles from the contaminated air and collected at the base cap during the initial filtration stage(See illustration).
- Smaller and finer dust particles are further filtered by the filter element.





Technical Specifications

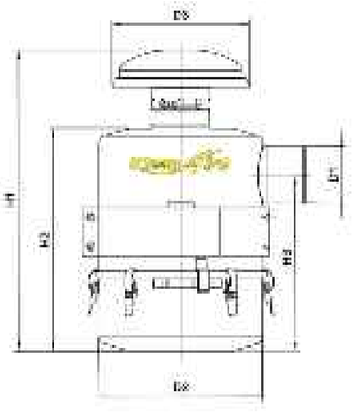
Model	Part No.	Max.Airflow		Dimension (mm)				Weight (Kg)
		CFM	CMM	C	D	H	L	
KAS2000	80200201	1178	33.3	152	430	780	533	25
KAS3000	80200203	1767	50.0	203	480	840	655	50

- Please refer to Technical Drawings for detailed dimensions.

KleanAire Oil Bath Aircleaner

How It Works

- Contaminated air is drawn through the inlet in the center of the unit towards the oil pan below.
- Heavier and larger dust particles are trapped in the oil pool at the base of the unit.
- Lighter and smaller particles are further trapped by the filtration mesh which is wetted by oil droplets as the air travels upwards through the mesh.
- Only purified air enters the aircleaner or engine.



Servicing Instructions

- Allow ten minutes after turning off engine for oil to settle in the pan.
- Release the fastening clips,remove the lower casing and dispose the oil and sludge in an appropriate manner.
- Remove the lower mesh and clean with diesel fuel or kerosene. Immersion of the whole mesh component in diesel oil or kerosene is recommended for best cleaning results.
- Drip dry or blow dry the mesh with compressed air before re-assembling the unit.
- Fill the pan with engine oil up to the marking level indicated.
- Ensure all fastening clips are secured.
- SAE Grade 10 oil is recommended for sub zero temperature and SAE Grade 30 for all other temperatures.

Technical Specifications

Model	Part No.	Max.Air Flow		Dimension(mm)						Weight of unit without oil(Kg)	Oil (ltr)
		CFM	CMM	D1	D2	D3	H1	H2	H3		
KAB24	902401	118	3.3	60	170	150	331	238	188	4.8	0.4
KAB26	902601	235	6.7	82	230	200	443	324	263	8.8	1.5
KAB28	902801	382	10.8	95	270	235	568	415	340	10	2.1
KAB48	904801	412	11.7	95	270	235	610	458	383	11	2.1
KAB68	906801	705	20.0	132	380	320	700	518	409	24	3.8
KAB68–6	906802	765	21.7	152	380	320	700	518	403	24	3.8
KAB88	908801	1059	30.0	152	415	387	822	636	501	30	4.8
KAB108	9010801	1412	40.0	203	480	203	685	605	455	40.2	7.5

- Select the appropriate oil bath model as per the engine's airflow requirement.
- Tested by independent institutions in accordance to ISO 5011 : 2000
- Please refer to Technical Drawings for detailed dimensions.

Cyclonic Precleaner

Metal Exhaust Tubes

- Please refer to Technical Drawings for detailed dimensions.

KleanAire Precleaner Installation Photos

Excavator

Excavator

Rotary Driller

Loader

Loader

Skid Steer Loader

Backhoe Loader

Road Roller

Road Roller

Loader

Grader

Paver

KleanAire Precleaner Installation Photos

Bulldozer

Bulldozer

Surface Miller

Rock Driller

Dump Truck

Dump Truck

Forklift

Excavator

Road Sweeper

Tractor

Tractor

Combine Harvester