



An ISO 9001 : 2008 Registered Company

EQUIPMENT GROUP & CATEGORY

Equipment Group	Equipment Category	Protection Level	Hazard Gas	Hazard Dust	Use
I - Mining	M1	Very high protection	-	-	Operable in Ex atmosphere
	M2	High protection	-	-	De-energized in Ex atmosphere
II - Industrial (non-Mining)	1	Very high protection	G	-	Zones 0, 1, 2
	2	High protection	-	D	Zones 20, 21, 22
			G	-	Zones 1, 2
3	Normal protection	G	-	Zone 2	
			-	D	Zone 22

CLASSIFICATION OF HAZARDOUS AREAS

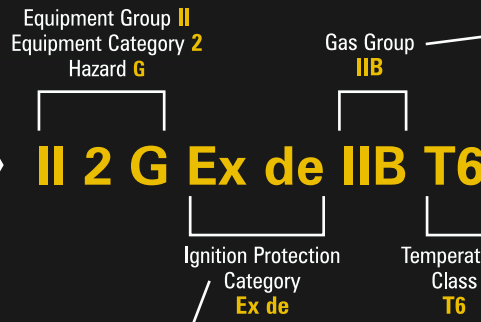
Area Classification	Zone Criteria (based on frequency and duration)
Zone 0 - Zone 20	Potentially Explosive substance present continuously or for long periods >1000hrs/yr
Zone 1 - Zone 21	Potentially Explosive substance likely to be present in normal operation >10hrs <1000hrs/yr
Zone 2 - Zone 22	Potentially Explosive substance unlikely to be present in normal operation, if it does will only be for short periods <10hrs/yr

GAS GROUPS

Gas Group	Representative Test Gas
I	Methane (Mining only)
IIA	Propane
IIB	Ethylene
IIC	Hydrogen

Gases are classified according to the ignitability of gas-air mixture. Refer to IEC 60079-20 for classification of common gases and vapors.

Gas Group IIB includes all gases for Group IIA



IGNITION PROTECTION CATEGORIES

Ignition Protection Categories	I.D.	Can Be Used In	Safety Principle
Increased safety	Ex e	Zone 1	No arcs, sparks or hot surfaces
Non-sparking equipment	Ex nA	Zone 2	
Pressurized encapsulation	Ex d	Zone 1	Controls an internal explosion and extinguishes the flame
Sand encapsulation	Ex q	Zone 1	
Enclosed switching device	Ex nC	Zone 2	
Intrinsic safety (special requirements)	Ex ia	Zone 0	Limits the energy of the sparks and the temp. of the surface
Intrinsic safety temperature	Ex ib	Zone 1	
Energy-limiting equipment	Ex nL	Zone 2	
Encapsulation	Ex m	Zone 1	Separates source of ignition from potentially explosive atmosphere
Oil encapsulation	Ex o	Zone 1	
Pressurization	Ex p	Zone 1	
Simplified pressurization	Ex nP	Zone 2	
Vapor-proof housing	Ex nR	Zone 2	

TEMPERATURE CLASSES

Class	T1	T2	T3	T4	T5	T6
	MAXIMUM SURFACE TEMPERATURE					
	450°C	300°C	200°C	135°C	100°C	85°C
IIB	Acetone Ammoniac Benzene Acetic Acid Ethane Ethyl Acetate Ethyl Chloride Methanol Naphthalene Phenol Propane	i-Amylacetate n-Butane n-Butyl Alcohol	Gasolines Diesel Fuels Heating Oils n-Hexane	Acetaldehyde	-	-
IIB	Town gas (lighting gas)	Ethylene Ethylene Oxide	Hydrogen Sulfide	Ethylether	-	-
IIC	Hydrogen	Acetylene	-	-	-	Carbon Disulphide

Gas Group IIB, Class T6 includes all specifications for Gas Group IIA, Class T1-T6 and Gas Group IIB, T1-T6

Highlighted areas in charts apply to Euramco Safety's ATEX Certification String

EC-Type Examination Certificate Number: **DEMKO 09 ATEX 0926969**
 CE Hazardous Location Marking: **CE0539**
 Ingress Protection: **IP55**

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Hazardous Location Line



Ventilation Solutions for Dangerous Environments



ELECTRIC BLOWERS

UB20xx 8"/20cm Blower/Exhauster

Powerful, compact size and lightweight



Intrinsically safe blower with totally enclosed motor is safe for use in a variety of adverse atmospheres. Super compact and lightweight while delivering the highest CFM available in its class. Anti-static housing for hazardous conditions. Tough dual wall casing — weather proof, chemical resistant and dent proof. Ultra-quiet operation at 74dB. Power cable is 30'/9m long.

Detachable in seconds, the Quick-Couple™ canister* conveniently reverses from discharge to suction, making use and storage easier while protecting the duct from rips and tears. Optional Quick-Couple™ storage canister and attached 8"/20cm conductive duct in 15'/4.6m or 25'/7.6m lengths.

*Fan requires Quick-Couple™ canister or adapter for duct attachment.

CERTIFICATIONS: EF7002, EF7005, EF8002 & EF8005:
Motor – ATEX II 2 G Ex d IIB; Unit – ATEX II 2 G Ex de IIB T6

Order #	Description	Hp	Ship Wt. (lbs/kg)	Free Air (cfm/m ³ /hr)
EF7002	8"/20cm Blower/Exhauster only 115V, 60Hz, No Plug, No Adapter	1/3	25/11	980/1666
EF7005	8"/20cm Blower/Exhauster only 115V, 60Hz, Adapter incl., No Plug	1/3	28/13	980/1666
EF8002	8"/20cm Blower/Exhauster only 220V, 50/60Hz, No Adapter	1/4	25/11	819/1392
EF8005	8"/20cm Blower/Exhauster only 220V, 50/60Hz, 20cm Adapter incl.	1/4	28/13	819/1392

AIRFLOW (cfm/m³/hr)

Order #	Description	AIRFLOW (cfm/m ³ /hr)	
		(1) 90° Duct Bend	(2) 90° Duct Bends
EF7015	8"/20cm Blower w/ Canister, 15'/4.6m Duct	789/1341	666/1132
EF7025	8"/20cm Blower w/ Canister, 25'/7.6m Duct	722/1227	614/1043
EF8015	8"/20cm Blower w/ Canister, 15'/4.6m Duct	659/1120	557/946
EF8025	8"/20cm Blower w/ Canister, 25'/7.6m Duct	603/1025	510/867

UB20xx M.E.D.™ Manhole Entry Device



The Intrinsically Safe UB20xx System utilizes high strength polymers with an anti-static housing designed to discharge static build-up safely. The M.E.D.™ allows workers to enter and exit small man-size openings while maintaining continuous ventilation. Without such a device, duct fills the manhole opening, preventing rapid entry and exit. Tightly integrated into the UB-line of confined space ventilation equipment, RAMFAN's M.E.D.™ is quick to assemble and the new swiveling elbow makes duct alignment easy.

Order #	Description	Ship Wt. (lbs/kg)
EF7015-MEDXX	8"/20cm 115V Blower/Exhauster, Quick-Couple™ Canister w/ 15'/4.6m & 5'/1.5m of duct, M.E.D.™, 90° Swivel Elbow & Universal Mount	51/23
EF8015-MEDXX	8"/20cm 220V Blower/Exhauster, Quick-Couple™ Canister w/ 15'/4.6m & 5'/1.5m of duct, M.E.D.™, 90° Swivel Elbow & Universal Mount	51/23

EFi75xx 12"/30cm Blower/Exhauster

Dual Voltage, Intrinsically Safe



Blow or exhaust hazardous/ explosive gases safely. Intrinsically safe motor, 100% duty cycle TEAO. Tough, chemical resistant ABS housing, carbon-filled to conduct static charges to ground. IP65 rain tested switch enclosure "watertight" and integral 12"/30cm duct adapters. Reliable, Rugged and Cost Effective.

CERTIFICATIONS: EB7201xx:
Motor – ATEX II 2 G Ex d IIB
Unit – ATEX II 2 G Ex de IIB T6

Order #	Description	Hp	Ship Wt. (lbs/kg)	Free Air (cfm/m ³ /hr)
EB7201XX	12"/30cm Blower/Exhauster 115V/230V, 50/60Hz	.75	58/26	2500/4248

EFi50xx/EFi120xx/EFi150xx 16"/40cm Blower/Exhauster

Rugged and Reliable



Motor is totally enclosed for use in hazardous locations. Blow or exhaust hazardous or explosive gases safely. High strength, anti-static glass reinforced ABS housing is lightweight, corrosion proof and chemical resistant. IP65 rain tested switch enclosure and reversible Integral duct adapter. Stackable for ventilation of larger areas and easy storage.

CERTIFICATIONS: EA8000xx: Motor – UL Class I - Group D; UL Class II - Group E, F, G; **EA8120xx & EG8200xx:** Motor – ATEX II 2 G Ex d IIB
Unit – ATEX II 2 G Ex de IIB T6

Order #	Description	Hp	Ship Wt. (lbs/kg)	Free Air (cfm/m ³ /hr)
EA8000XX (EFi50xx)	16"/40cm Blower/Exhauster 115V/230V, 50/60Hz	0.5	51/23	3200/5440
EA8120XX (EFi120xx)	16"/40cm Blower/Exhauster 110V/240V, 50Hz	1.2	58/26	3750/6371
EG8200XX (EFi150xx)	16"/40cm Blower/Exhauster 115V/230V, 50/60Hz	1.5	62/28	4459/7576

DUCTING

Conductive Ducting

Reinforced, anti-static duct safely conducts static electricity to the ground circuit of the blower. All duct materials are flame retardant. Duct storage bags available for all duct sizes. Storage bag included with duct purchase

Order #	Description	Ship Wt. (lbs/kg)
FDT-1215CBB	12"/30cm Conductive reinforced duct 15'/4.6m	14/6
FDT-1225CBB	12"/30cm Conductive reinforced duct 25'/7.6m	19/9
FDT-1615CBB	16"/40cm Conductive reinforced duct 15'/4.6m	26/12
FDT-1625CBB	16"/40cm Conductive reinforced duct 25'/7.6m	33/15
BG12	12"/30cm Duct Storage Bag 15'/4.6m	2/1
BG12L	12"/30cm Duct Storage Bag 25'/7.6m	2/1
BG16	16"/40cm Duct Storage Bag	2/1

AIR DRIVEN BLOWERS

AFi75xx 12"/30cm Blower/Exhauster

Compact, Air Driven Ventilator

Intrinsically safe for use in adverse atmospheres. Pneumatic blower exhausts outside of duct, compressed air is not in airstream. Complete with filter, motor lubricator, exhaust muffler, air control valve, static grounding cord and integral duct adapters.



AFi75xx

Order #	Description	Ship Wt. (lbs/kg)	Free Air (cfm/m ³ /hr)	Air Consumption (cfm/m ³ /hr)
AB7000	12"/30cm Intrinsically Safe Blower/Exhauster	39/18	2042/3469	40/68

AFi50xx 16"/40cm Blower/Exhauster

Stackable Air Driven Ventilator

High Strength, anti-static ABS housing with integral duct adapter is lightweight, corrosion proof and chemical resistant. Exhausts outside of duct, compressed air not in airstream. Comes complete with filter, motor lubricator, exhaust muffler, air control valve and static grounding cord.



AFi50xx

Order #	Description	Ship Wt. (lbs/kg)	Free Air (cfm/m ³ /hr)	Air Consumption (cfm/m ³ /hr)
AA7000	16"/40cm Intrinsically Safe Blower/Exhauster	48/22	3200/5437	40/68



RV760S/RV760/RV1500 Venturi Cones

Pneumatic Hazardous Location Ventilators

Pneumatic (compressed air) or saturated steam powered Venturi cones are intrinsically safe for use in adverse or explosive atmospheres when used with optional static cord. Cones are anti-static, crush and dent resistant. Cylindrical mixing chamber delivers higher induction ratios and fits standard API 3"/7cm and 6"/15cm openings. Requires minimum maintenance.

Order #	Description	Ship Weight (lbs/kg)
RV760S	Venturi 3"/7cm Cone Opening	6/3
RV760	Venturi 3"/7cm Cone Opening	7/3
RV1500	Venturi 6"/15cm Cone Opening	19/9


AIRFLOW (cfm/m³/hr)

Order #	Air Consumed		Total Airflow	
	40psig Inlet Pressure	80psig Inlet Pressure	40psig Inlet Pressure	80psig Inlet Pressure
RV760S	22/37	58/99	810/1376	1180/2006
RV760	22/37	58/99	1001/1700	1439/2445
RV1500	59/100	124/211	2740/4655	3329/5656

The Explosion Proof Rating – Recognized Worldwide

We have designed and manufactured a line of fans specifically for use in Explosive Atmospheres to meet the standards specified by the ATEX Directive 94/9/EC, which went into effect on March 1, 1996 and applies to all manufacturers worldwide.

This directive applies to all electrical equipment used in potentially explosive atmospheres; defined as gas, vapor or mist and are capable of causing an explosion through their own potential sources of ignition.

All RAMFAN Explosion Proof Blowers and Exhausters have been certified by UL to bear the ATEX Mark  and have been tested to the standards set forth in the ATEX Directive. Our certification covers the whole unit: the motor, the connecting cable, the fan blade terminal box, the power cable and the plugs.

The following information explains the ATEX Classification and Designation Identification Numbering System. The Highlighted areas specifically apply to the Classification Designation numbers you will see on our explosion proof units.

See back cover for an explanation of the ATEX string – ATEX EXPLAINED.





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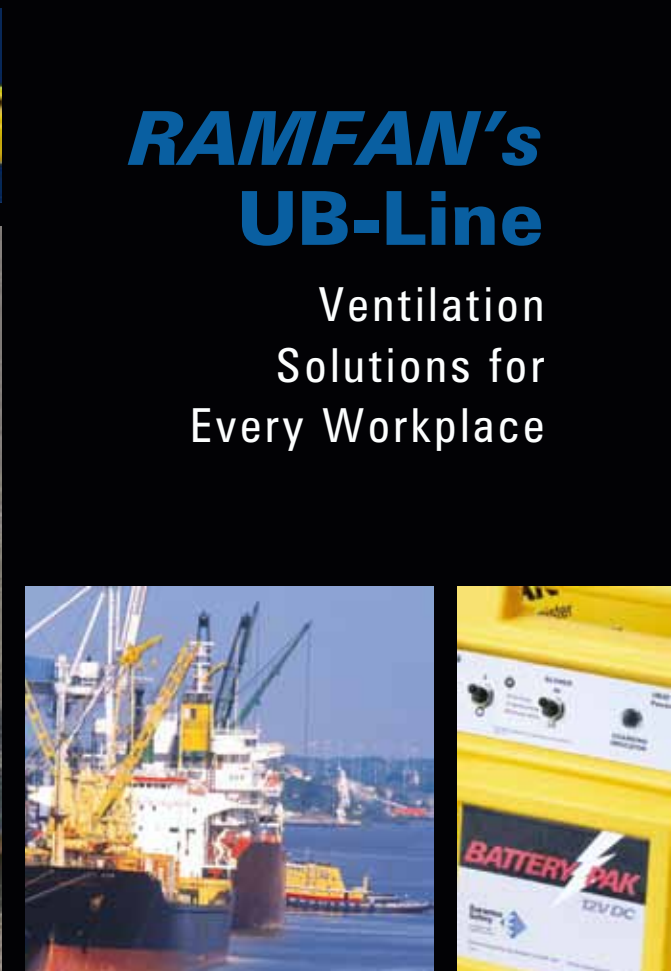
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RAMFAN's UB-Line

Ventilation
Solutions for
Every Workplace

UB20 8"/20cm Blower/Exhauster

Powerful, Compact Size and Lightweight

The UB20 High Velocity Turbo Blower is the heart of each ventilation system. The UB-Line is ideal for general use, confined spaces, hazardous ventilation and deliver the highest airflow in their class. Versatile units give you a blower and exhauster in one.



Order #	Description	Hp	Ship Weight (lbs/kg)	Free Air (cfm/m ³ /hr)
ED7002	115V, 60Hz Blower	1/3	19/9	980/1666
ED8002	220V, 50Hz Blower	1/4	19/9	819/1392
ED9002	12V DC Blower	1/3	19/9	862/1465



UB20 Battery Pak & Charger

12V DC High-Low Control UB20

RAMFAN's long-life Battery Pak now with infinitely high-low control. Pulse width modulation extend battery life up to 10 hours in low setting yet gives a full 2.5 hours on high. Can be used with vehicle battery with optional connector. Built-in charger allows you to fully recharge the battery in 12 hours.

Order #	Description	Ship Weight (lbs/kg)
BPV12	12V DC Battery Pak w/ built in Charger	36/16
ED9015BPV	8"/20cm Blower/Exhauster, 12V DC Battery Pak w/ built in Charger and Quick-Couple™ Canister w/ 15'/4.6m duct	66/30
ED9025BPV	8"/20cm Blower/Exhauster, 12V DC Battery Pak w/ built in Charger and Quick-Couple™ Canister w/ 25'/7.6m duct	81/37



UB20 In-Line Heater

Portable Heat Where You Need It

Heat confined spaces, command centers and rescue shelters with this high performance heating system. Delivers up to 70,000 BTU's of safe, warm breathing air with its propane-fired, heat-exchanger for up to 10 hours. Remote thermostat included.

Order #	Description	Ship Weight (lbs/kg)
HA01-100HT	8"/20cm Blower/Exhauster, Heater w/ Regulator, Quick-Couple™ Canister w/ 15'/4.6m duct	74/34
HA01-125HT	8"/20cm Blower/Exhauster, Heater w/ Regulator, Quick-Couple™ Canister w/ 25'/7.6m duct	79/36
ED7125-HT	8"/20cm Blower/Exhauster, Heater w/ Regulator, 15'/4.6m Reinforced duct, duct storage bag	75/34

UB20 Quick-Couple™ Reversible Canister

Detachable in seconds, the Quick-Couple™ Canister with attached duct conveniently reverses from discharge to suction, making use and storage easier while protecting duct from rips and tears. Available in 15'/4.6m or 25'/7.6m lengths. Choice of conductive or non-conductive material.



Order #	Description	Ship Weight (lbs/kg)
ED7004CS	Canister w/ 15'/4.6m duct	16/7
ED7004CL	Canister w/ 25'/7.6m duct	25/11
EF7004CS	Canister w/ 15'/4.6m conductive duct	15/7
EF7004CL	Canister w/ 25'/7.6m conductive duct	25/11
ED7015	AC Blower w/ Canister & 15'/4.6m duct	35/16
ED7025	AC Blower w/ Canister & 25'/7.6m duct	44/20
ED9015	DC Blower & Battery Clips w/ Canister & 15'/4.6m duct	36/16
ED9025	DC Blower & Battery Clips w/ Canister & 25'/7.6m duct	45/20

Order #	Power/Duct	Free Air	AIRFLOW (cfm/m ³ /hr)	
			(1) 90° Duct Bend	(2) 90° Duct Bends
ED7015	115V/15'/4.6m	980/1666	789/1341	666/1132
ED7025	115V/25'/7.6m	980/1666	722/1227	614/1043
ED9015	12V/15'/4.6m	862/1465	695/1181	586/996
ED9025	12V/25'/7.6m	862/1465	665/1181	565/960
EF7015	115V/15'/4.6m	980/1666	789/1341	666/1132
EF7025	115V/25'/7.6m	980/1666	722/1227	614/1043



UB20 Turbo-Couple™ Duct greater than 50'/15m?

Quick-connecting two or more RAMFAN UB20 axial blowers in series increases airflow up to 50% when blowing through long and windy duct runs. The UB20 was designed for 15'/4.6m–25'/7.6m duct runs but airflow significantly drops when blowing through more than 50'/15m of duct or when confronted with multiple turns in the duct. When the job calls for 50'/15m–100'/30m of duct you need a Turbo-Couple™. Long, windy duct runs need more power and pressure to deliver sufficient airflow, a costly proposition. The Turbo-Couple™ delivers what is needed by quickly joining two or more UB20's in series, each adding pressure and power to deliver a dramatic airflow increase through the duct.

U.S. Patent No. D602,347S

Order #	Description	Ship Weight (lbs/kg)
ED7300	Turbo-Couple™ Accessory	6/3
ED7000TC	8"/20cm 115V, 60Hz Blower/Exhausters (qty. 2) and Turbo-Couple™	44/20
ED8000TC	8"/20cm 220V, 50Hz Blower/Exhausters (qty. 2) and Turbo-Couple™	44/20

UB20 M.E.D.™ Ventilation System Manhole Entry Device

The M.E.D.™ allows workers to enter and exit small man-size openings while maintaining continuous ventilation. Without such a device, duct fills the manhole opening, preventing rapid entry and exit. Tightly integrated into the UB-line of confined space ventilation equipment, RAMFAN's M.E.D.™ system is quick to assemble and the new swiveling elbow makes duct alignment easy.

Order #	Description	Ship Weight (lbs/kg)
ED7015MED	8"/20cm 115V, 60Hz Blower/Exhauster, Quick-Couple™ Canister w/ 15'/4.6m & 5'/1.5m of duct, Manhole Entry Device, 90° Swivel Elbow & Universal Mount	51/23
ED8015MED	8"/20cm 220V, 50Hz Blower/Exhauster, Quick-Couple™ Canister w/ 15'/4.6m & 5'/1.5m of duct, Manhole Entry Device, 90° Swivel Elbow & Universal Mount	51/23



UB20xx 8"/20cm Intrinsically Safe Blower/Exhauster

Ideal for Hazardous Environments

When conditions become dangerous, the UB20xx tough conductive housing adds static dissipation to its properties. These anti-static units are lightweight for easy transport, but versatile enough to operate under heavy workloads and demanding conditions. Fan requires Quick-Couple™ canister or adapter for duct attachment.



Compliance: ATEX Unit certification: II 2 G Ex de IIB T6;
ATEX Motor certification: II 2 G Ex d IIB.

Order #	Description	Hp	Ship Weight (lbs/kg)	Free Air (cfm/m ³ /hr)
EF7002	115V, 60Hz Blower	1/3	25/11	980/1666
EF7005	115V, 60Hz Blower w/ duct adapter	1/3	28/13	980/1666
EF7015	115V, 60Hz Blower with Q-C Canister & 15'/4.6m duct	1/3	31/14	789/1341
EF7025	115V, 60Hz Blower with Q-C Canister & 25'/7.6m duct	1/3	50/23	722/1227
EF8002	220V, 50Hz Blower	1/4	25/11	819/1392
EF8005	220V, 50Hz Blower w/ duct adapter	1/4	28/13	819/1392
EF8015	220V, 50Hz Blower with Q-C Canister & 15'/4.6m duct	1/4	31/14	659/1120
EF8025	220V, 50Hz Blower with Q-C Canister & 25'/7.6m duct	1/4	50/23	603/1025
EZ-5-15P	115V Plug NEMA 5-15p 15Amp	-	1/5	-
EZ-L5-15P	115V Plug NEMA L5-15p 15 Amp Twist-Lok	-	1/5	-
EZ-UGP15231	125V Plug 15A Killark UGP-15231	-	1/5	-

UB30 12"/30cm Blower/Exhauster

Dual voltage, dual frequency

The UB30 is simply the toughest, most durable, easy to maintain and versatile blower in its class. Unmatched performance, dual voltage-dual frequency versatility, tough polymer shell, turbo-impeller and stackable design feature makes for an unbeatable package. Optional 8"/20cm duct reducer accessory.

U.S. Patent No. D583,461; D585,972; D588,537



Order #	Description	Ship Weight (lbs/kg)
EJ4002	12"/30cm, 115V, 60Hz Blower/Exhauster	44/20
EJ8002	12"/30cm, 230V, 50Hz Blower/Exhauster	44/20

Order #	Power/Duct	Free Air	AIRFLOW	
			(1) 90° Duct Bend	(2) 90° Duct Bends
EJ4002	5/8Hp, 15'/4.6m	2420cfm	2050cfm	1875cfm
EJ8002	5/8Hp, 15'/4.6m	2873m ³ /hr	2550m ³ /hr	2340m ³ /hr

ECKO-FLEX Ducting

Standard duct constructed of vinyl-coated polyester and anti-static duct neoprene polyester. All duct materials are flame retardant.



Order #	Description	Ship Weight (lbs/kg)
FDT-21624046BR	8"/20cm Reinforced Duct 15'/4.6m	11/5
FDT-21624076BR	8"/20cm Reinforced Duct 25'/7.6m	17/8
FDT-30534005BB	12"/30cm Reinforced Duct 16.4'/5m	16/7
FDT-30534010BB	12"/30cm Reinforced Duct 32.8'/10m	28/13
BG12	Storage bag for 8"/20cm x 15'/4.6m or 25'/7.6m Duct & 12"/30cm x 25'/7.6m	2/1
BG12S	Storage bag for 12"/30cm x 15'/4.6m Duct	2/1
BG16	Storage bag for 16"/40cm Duct	2/1