

ROOTS PAK™

UNIVERSAL RAI® PACKAGED UNITS

DISCHARGE PIPE SIZES 2" THRU 6"



BASIC PACKAGE DESCRIPTION

Available through **Authorized Roots Distributors**, RootsPak™ completely assembled, factory-engineered and guaranteed packages incorporate 17 frame sizes of Universal RAI rotary

blowers in 3 package arrangements to suit your various installation and application requirements. Flows to 2370 cfm, pressures to 15 psig or vacuums to 16" Hg are possible.

The basic, or type "S", package consists of the blower, V-belt drive, OSHA guard, motor slide base, inlet filter and inlet silencer all mounted on top of a heavy-duty, unitized base/discharge silencer in one compact, easy to install package. A pressure relief valve is mounted on the discharge silencer. A type "F" package is available, with an inlet filter-silencer replacing the separate inlet filter and inlet silencer. For vacuum service, a type "V" package can be supplied with a vacuum relief valve mounted on top of a tee at the blower inlet.

Motor and other accessories are optional. All three arrangements are fully described in the table below and illustrated on the next page.

The combination base/discharge silencer is a rigid, one-piece weldment, reinforced for minimal vibration. The inlet filter is supplied with a 10 micron pleated paper element. All standard components are designed for indoor or outdoor operation.

The Universal RAI blower consists of a grey iron casing, carburized and ground alloy steel timing gears secured to steel shafts with a taper mounting and locknut, and grey iron involute impellers. Oversized anti-friction bearings are used, with a cylindrical roller bearing at the drive shaft on all models to provide increased bearing life and to withstand V-belt pull. The Universal RAI features thrust control, with splash oil lube on the gear end and grease lube on the drive end.

PACKAGE COMPONENTS

TYPE "S" PACKAGE	TYPE "F" PACKAGE	TYPE "V" PACKAGE
Howden Roots URAI blower Unitized base/discharge silencer Inlet filter with weatherhood Horizontal inlet silencer & support V-belt drive OSHA guard Motor slide base Interconnecting fittings Pressure relief valve Shipped completely assembled Domestic shipping preparation Suitable for indoor/outdoor installation	Howden Roots URAI blower Unitized base/discharge silencer Inlet filter-silencer with weatherhood V-belt drive OSHA guard Motor slide base Interconnecting fittings Pressure relief valve Shipped completely assembled Domestic shipping preparation Suitable for indoor/outdoor installation	Howden Roots URAI blower Unitized base/discharge silencer V-belt drive OSHA guard Motor slide base Interconnecting fittings Vacuum relief valve Shipped completely assembled Domestic shipping preparation Suitable for indoor/outdoor installation

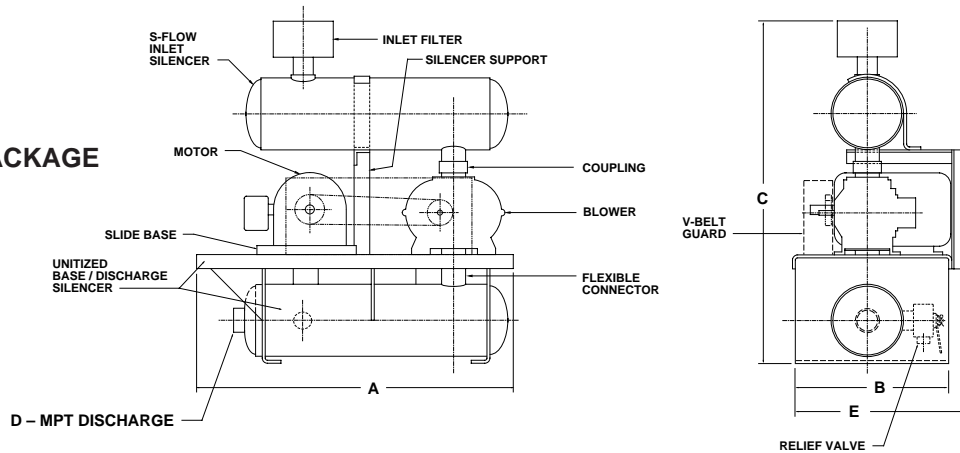
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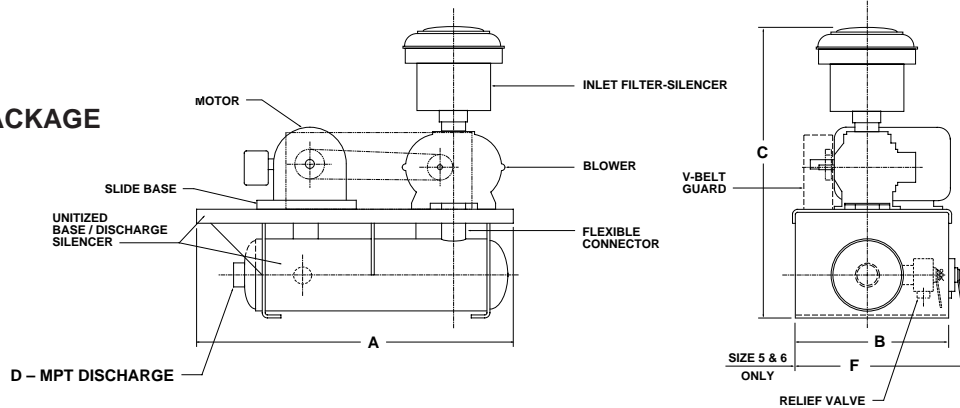
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OUTLINE DRAWING & DIMENSIONAL TABLE

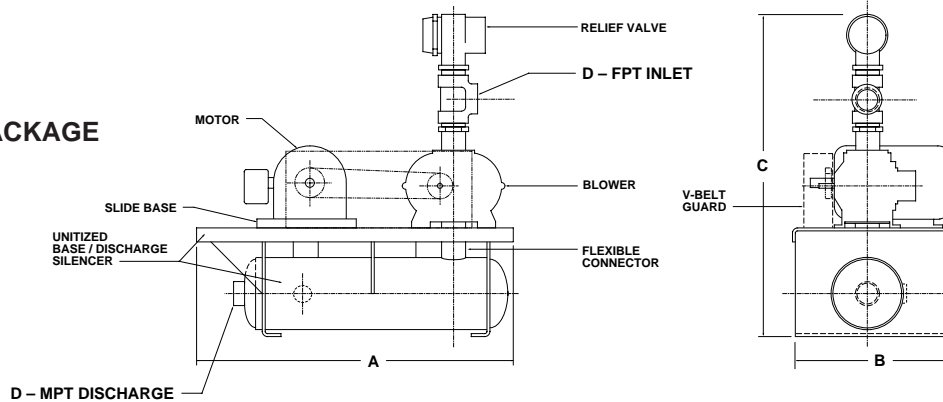
TYPE "S" PACKAGE



TYPE "F" PACKAGE



TYPE "V" PACKAGE



NOTES:

1. All dimensions are in inches.
2. Dimensions are approximate – do not use for construction. Packages may not be exactly as shown.
3. Dimension "C" and approximate weights are for largest blower frame size used.
4. Approximate weights do not include motor.

Discharge Pipe Size	Blower Frame Sizes	A	B	C (Maximum)			D	E	F	Approx. Net Weight (Maximum)		
				Type "S"	Type "F"	Type "V"				Type "S"	Type "F"	Type "V"
2	22, 24, 32, 33, 42	39.00	23.00	48.00	36.38	37.75	2	25.18	-	325	295	290
2-1/2	36, 45, 53	44.50	27.00	58.13	57.13	43.25	2-1/2	29.18	-	510	400	415
3	45, 47, 56, 65	51.50	29.25	68.13	56.38	47.75	3	32.50	-	835	725	710
4	47, 56, 59, 68, 76	56.00	32.50	82.06	64.50	60.93	4	35.75	-	1174	1037	1012
5	59, 68, 711	66.00	34.50	82.75	71.38	69.50	5	37.75	35.50	1501	1280	1250
6	615, 711, 718	68.50	34.50	99.13	98.00	72.50	6	37.75	37.62	1837	1495	1330

ROOTSPAK™ TECHNICAL DATA

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Blower Frame Size	MAXIMUM RECOMMENDED FLOW / PRESSURE / VACUUM FOR SILENCER SIZES LISTED BELOW				
	Type "S" and "F" Packages			Type "V" Package	
	Part Number	Part Number	Maximum Flow / Pressure / Horsepower	Part Number	Maximum Flow / Horsepower
22	22-1.5-2S	22-1.5-2F	75 CFM / 3-12 PSIG / 5 HP	22-2V	75 CFM / 14" Hg
24	24-2-2S	24-2-2F	140 CFM / 3-7 PSIG / 7.5 HP	24-2V	140 CFM / 14" Hg
32	32-1.5-2S	32-1.5-2F	100 CFM / 7-15 PSIG / 10 HP	-	-
32	32-2-2S	32-2-2F	140 CFM / 7-15 PSIG / 15 HP	32-2V	110 CFM / 15" Hg
33	33-2-2S	33-2-2F	150 CFM / 6-12 PSIG / 10 HP	33-2V	160 CFM / 14" Hg
36	36-2.5-2.5S	36-2.5-2.5F	200 CFM / 3-7 PSIG / 10 HP	36-2.5V	250 CFM / 14" Hg
36	36-3-2.5S	36-3-2.5F	300 CFM / 3-7 PSIG / 15 HP	-	-
42	42-2-2S	42-2-2F	140 CFM / 9-15 PSIG / 15 HP	42-2V	160 CFM / 14" Hg
45	45-2.5-2.5S	42-2.5-2.5F	200 CFM / 5-10 PSIG / 15 HP	45-2.5V	220 CFM / 14" Hg
45	45-3-2.5S	42-3-2.5F	240 CFM / 5-10 PSIG / 15 HP	-	-
45	45-3-3S	45-3-3F	300 CFM / 5-10 PSIG / 20 HP	45-3V	350 CFM / 14" Hg
47	47-3-3S	47-3-3F	400 CFM / 3-7 PSIG / 15 HP	47-3V	400 CFM / 14" Hg
47	47-4-4S	47-4-4F	530 CFM / 3-7 PSIG / 20 HP	47-4V	430 CFM / 14" Hg
47	47-4-3S	47-4-3F	400 CFM / 3-7 PSIG / 20 HP	-	-
53	53-2.5-2.5S	53-2.5-2.5F	200 CFM / 9-15 PSIG / 15 HP	53-2.5V	250 CFM / 14" Hg
53	53-3-2.5S	53-3-2.5F	300 CFM / 9-15 PSIG / 25 HP	-	-
56	56-4-3S	56-4-3F	400 CFM / 5-10 PSIG / 25 HP	56-3V	370 CFM / 14" Hg
56	56-4-4S	56-4-4F	550 CFM / 5-10 PSIG / 30 HP	56-4V	510 CFM / 14" Hg
59	59-4-4S	59-4-4F	550 CFM / 3-7 PSIG / 20 HP	59-4V	700 CFM / 14" Hg
59	59-5-4S	59-5-4F	700 CFM / 3-7 PSIG / 25 HP	59-5V	780 CFM / 14" Hg
65	65-3-3S	65-3-3F	300 CFM / 9-15 PSIG / 30 HP	65-3V	370 CFM / 16" Hg
68	68-4-4S	68-4-4F	550 CFM / 6-12 PSIG / 30 HP	68-4V	580 CFM / 16" Hg
68	68-5-4S	68-5-4F	700 CFM / 6-12 PSIG / 40 HP	-	-
68	68-5-5S	68-5-5F	850 CFM / 6-12 PSIG / 50 HP	68-5V	700 CFM / 16" Hg
615	615-6-6S	615-6-6F	1350 CFM / 3-7 PSIG / 40 HP	615-6V	1400 CFM / 12" Hg
76	76-4-4S	76-4-4F	550 CFM / 9-15 PSIG / 40 HP	76-4V	670 CFM / 16" Hg
711	711-6-5S	711-6-5F	1000 CFM / 5-10 PSIG / 50 HP	711-5V	1050 CFM / 16" Hg
711	711-6-6S	711-6-6F	1350 CFM / 5-10 PSIG / 50 HP	711-6V	1250 CFM / 16" Hg
718	718-8-6S	718-8-6F	2000 CFM / 3-7 PSIG / 75 HP	-	-

Notes: Silencer sizes are shown in each Part Number.

Example:

- 22-1.5-2S 22 Universal RAI blower, 1-1/2" inlet silencer, 2" discharge silencer
- 22-2-2F 22 Universal RAI blower, 2" inlet filter-silencer, 2" discharge silencer
- 22-2V 22 Universal RAI blower, 2" discharge silencer

DESIGN & CONSTRUCTION FEATURES

1. Factory engineered, factory guaranteed
2. Compact package designed for ease of handling and installation
3. Indoor or outdoor operation (when ordered with suitable motor enclosure)
4. Blower manufactured in an ISO 9001 certified facility and covered by an 18/24 month uncontested warranty
5. Refer to bulletin B-12X95 for Universal RAI blower details

Contact your Authorized Roots Distributor for complete drawing and application information on the exact RootsPak to fill your application needs. Roots' wide selection ensures proper pipe sizing, eliminating head loss, thus providing more efficient operation. Roots offers the widest selection of any blower packager in the industry. Offering the RootsPak through Roots' Authorized Distributor network guarantees the highest quality package available.

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