



SIDE CHANNEL BLOWERS

RT-1 / RT-2 / RT-3 / RT-4 series	23
RT-4 / RT-5 / RT-6 / RT-7 / RT-8 / RT-9 series	24
RT-23 / RT-33 / RT-43 / RT-63 / RT-83 series	25

Applications

Aeration

Swimming pools and whirlpools
Ponds and aquaria
Sewage plants and fluidisation systems

Drying

Electronic components
Plastic profiles

Cleaning

Printing machines
Paper cutting equipment
Cloth cutter

Compressed air

Gas and vapours compression
Powder and granule conveyor

Vacuum

Packing machines
Filling stations
Chemical and medical process technology
Oven drying

Advantages

- Pulsation-free discharge
- No vibration and dynamic stability
- Minimal maintenance
- Easy installation
- Low noise level
- 100% oil-free air
- Long life expectancy

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SIDE CHANNEL BLOWERS

Operating principle

Side channel blowers consist of a ring-shaped housing. Side channel and the rotor opposite create a working area between intake and blow-out connections. The blade segments of the rotor suck in the gas and create radial pressure during turning. The centrifugal force causes the gas to be pressed to the outside in the side channel. This creates a circular current between channel and blade segments. Due to the radial pressure, the gas to be compressed in the chamber begins turning. The spiral swirling compresses the gas several times and causes the pressure to rise. At the end of the chamber the compressed gas is then pushed pulsation-free by the rotor through the blow-out connection.



Setup of side channel blowers in parallel provides a maximum amount of air.

Setup of side channel blowers in series increases the individual high/low pressure.

Examples of use

Side channel blowers are used for applications which require more pressure or vacuum power than a centrifugal blower is able to provide.

The compression procedure is absolutely oil-free and provides applications where pollution of the gas is not allowed.

There are many application areas of side channel blowers, both in pressure and vacuum operation.

Side channel blowers are used for a wide variety of applications in the following industries:

- food and beverage industry
- paper and printing industry
- medical technology
- packaging industry
- water aeration and treatment
- textile industry
- plastics industry
- manufacturing industry
- environmental technology
- and many more

SIDE CHANNEL BLOWERS

Your advantages

Operating principle

The impeller sucks in the gas to be compressed through the input connection, compresses it with spiral swirling and pushes it out again through the output connection. This process occurs as a continuous air current and is thus pulsation-free.

No vibration

The side channel blower is mounted on a carrier plate which is particularly vibration-absorbent. Possible agitations caused by rotor operation are reduced as far as possible.

Minimal, simple maintenance

The impeller of the side channel blowers is mounted directly on the motor shaft. During operation, rotation is completely contactless and lubrication is thus not necessary. This makes operation almost maintenance-free even during continuous operation.

Easy Installation

The installation of the devices is without any problems. The side channel blowers are ready for connexion. Mount in desired axis position, connect the connections to the system, perform electrical installation and the device is ready for operation.

Low noise level

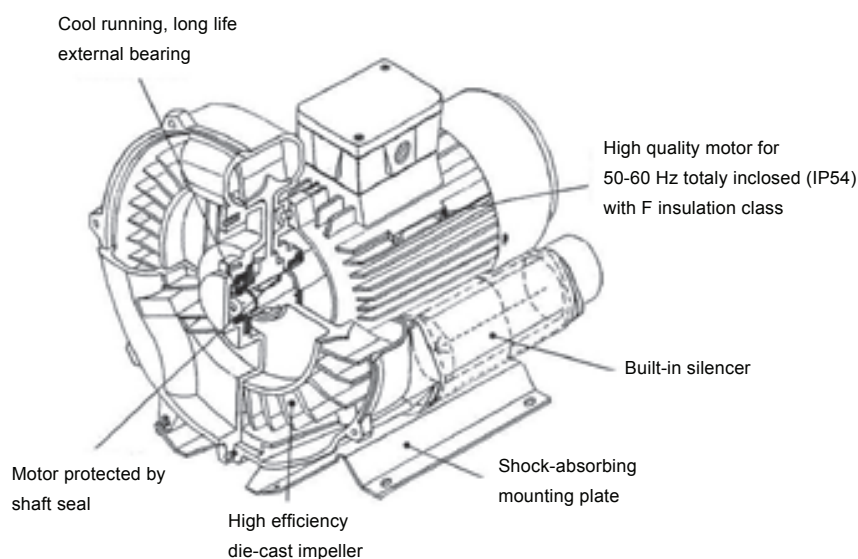
The side channel blowers are equipped with built-in silencers. The carrier plate is also silencing. A maximum degree of noise reduction is achieved. The noise level during operation is only 55 dB to 80 dB, depending on the model.

100 % oil-free air

Due to the contactless rotation of the impellers, lubrication is not necessary. The compression procedure is dry and oil-free and the gas to be compressed is not polluted.

Long life expectancy

The impeller is designed for high performance. The high-quality motor is enclosed in its own capsule and is protected by shaft sealing. Although the device's maintenance requirements are low, it has a long life span.

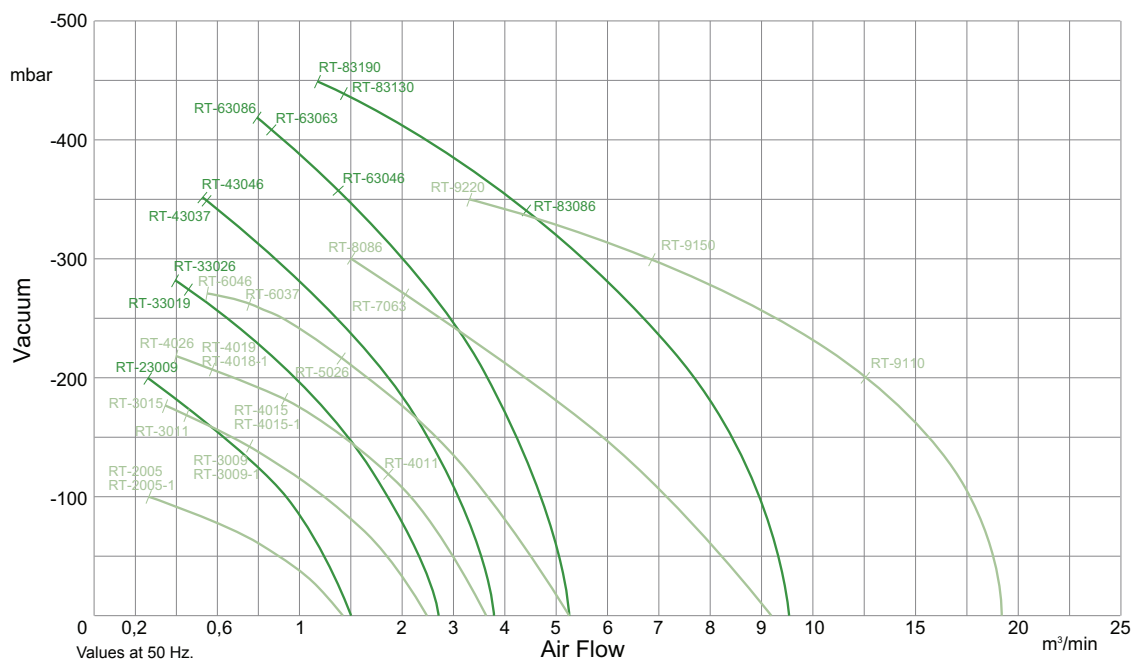


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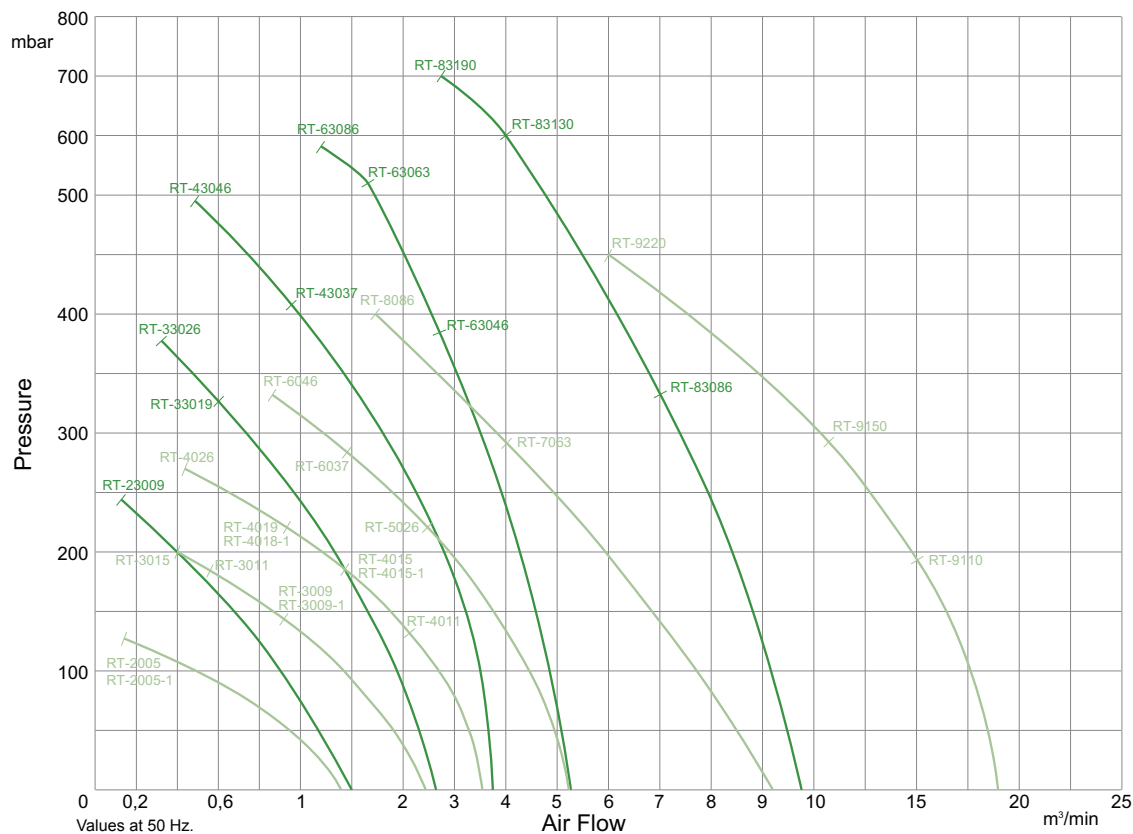
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SIDE CHANNEL BLOWERS

Suction curve



Blowing curve



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RT-1 / RT-2 / RT-3 / RT-4 series

Product characteristics

- Power 0.2 to 1.3 kW
- Connection size 1" to 2"

Technical data

Model		RT-1003	RT-1003-1	RT-2005	RT-2005-1	RT-3009	RT-3009-1	RT-3011	RT-3015	RT-4011	RT-4015	RT-4015-1
Current phase		3	1	3	1	3	1	3	3	3	3	1
Voltage	VAC	400	220	400	220	400	220	400	400	400	400	220
Frequency	Hz	50	50	50	50	50	50	50	50	50	50	50
Motor power	kW	0.2	0.2	0.4	0.4	0.75	0.75	0.9	1.3	0.9	1.3	1.3
Max. air flow	m ³ /min	0.8	0.8	1.4	1.4	2.4	2.4	2.4	2.4	3.6	3.6	3.6
Vacuum	mbar	70	70	110	110	140	140	165	175	130	180	180
Pressure	mbar	70	70	130	130	140	140	180	200	130	180	180
Noise level	dB	53	53	58	58	63	63	63	63	70	70	70
Connection size P		1" (25 mm)	1" (25 mm)	1 1/4" (32 mm)	1 1/4" (32 mm)	1 1/2" (40 mm)				2" (50 mm)		
Net weight	kg	6.5	6.5	11	11.5	14.5	15	15.5	16	20.5	22	22.5

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RT-4 / RT-5 / RT-6 / RT-7 / RT-8 / RT-9 series

Product characteristics

- Power 1.75 to 20.0 kW
- Connection size 2" to 4"

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Technical data

Model		RT-4019	RT-4026	RT-5026	RT-4018-1	RT-6037	RT-6046	RT-7063	RT-8086	RT-9110	RT-9150	RT-9220
Current phase		3	3	3	1	3	3	3	3	3	3	3
Voltage	VAC	400	400	400	220	400	400	400	400	400	400	400
Frequency	Hz	50	50	50	50	50	50	50	50	50	50	50
Motor power	kW	1.75	2.2	2.2	1.5	3.4	4	5.5	7.5	9	13	20
Max. air flow	m ³ /min	3.6	3.6	5.2	3.6	5.2	5.2	9.2	9.2	18.9	18.9	18.9
Vacuum	mbar	210	220	230	210	260	270	270	300	200	300	350
Pressure	mbar	220	270	230	220	280	330	300	400	200	300	450
Noise level	dB	70	70	72	70	72	72	74	74	76	76	76
Connection size P		2" (50 mm)				2" (50 mm)		2½" (64 mm)		4" (100 mm)		
Net weight	kg	23	26	32	23	35	38	78	82	100	112	159



RT-23 / RT-33 / RT-43 / RT-63 / RT-83 series

Product characteristics

- Power 1.5 to 9.6 kW
- Connection size 1 1/4" to 2 1/2"

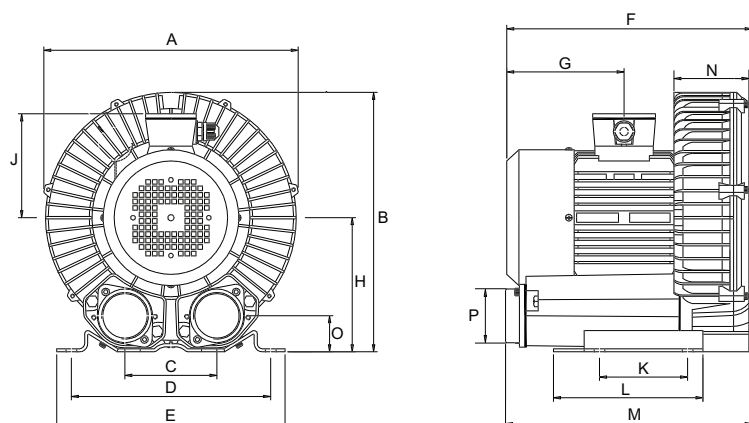
Technical data

Model		RT-23009	RT-33019	RT-33026	RT-43037	RT-43046	RT-23009-1	RT-63046	RT-63063	RT-63086	RT-83086	RT1-83130	RT1-83190
Current phase		3	3	3	3	3	1	3	3	3	3	3	3
Voltage	VAC	400	400	400	400	400	220	400	400	400	400	400	400
Frequency	Hz	50	50	50	50	50	50	50	50	50	50	50	50
Motor power	kW	0.75	1.75	2.2	3.4	4	0.75	4	5.5	7.5	7.5	11	16
Max. air flow	m³/min	1.5	2.6	2.6	3.7	3.7	1.5	5.2	5.2	5.2	9.6	9.6	9.6
Vacuum	mbar	200	275	280	345	355	200	360	410	420	320	430	450
Pressure	mbar	240	320	375	410	460	240	380	515	580	320	600	700
Noise level	dB	60	66	66	74	74	60	75	75	75	76	76	76
Connection size P		1 1/4" (32 mm)	1 1/2" (40 mm)		2" (50 mm)		1 1/4" (32 mm)		2" (50 mm)		2 1/2" (64 mm)		
Net weight	kg	17	25	28	43	45	17	55	72	81	112	142	160

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Dimensions single stage



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	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
RT-1003	208.5	213.5	71.0	165.0	186.0	209.5	72.0	108.0	142.0	-	100.0	205.0	54.0	38.0	1"
RT-1003-1	208.5	213.5	71.0	165.0	186.0	209.5	72.0	108.0	142.0	-	100.0	205.0	54.0	38.0	1"
RT-2005	248.0	249.0	91.0	205.0	227.0	239.0	118.0	130.0	112.0	83.0	108.0	245.0	63.0	42.0	1 1/4"
RT-2005-1	248.0	249.0	91.0	205.0	227.0	239.0	118.0	130.0	112.0	83.0	108.0	245.0	63.0	42.0	1 1/4"
RT-3009	285.0	301.0	115.0	225.0	257.0	279.0	106.0	153.0	124.0	90.0	130.0	264.0	76.0	45.0	1 1/2"
RT-3011	285.0	301.0	115.0	225.0	257.0	279.0	106.0	153.0	124.0	90.0	130.0	264.0	76.0	45.0	1 1/2"
RT-3015	285.0	301.0	115.0	225.0	257.0	279.0	106.0	153.0	124.0	90.0	130.0	264.0	76.0	45.0	1 1/2"
RT-3009-1	285.0	301.0	115.0	225.0	257.0	279.0	106.0	153.0	124.0	90.0	130.0	264.0	76.0	45.0	1 1/2"
RT-4011	332.0	338.5	120.0	260.0	298.0	320.0	153.0	175.0	135.5	115.0	195.0	321.5	98.0	47.0	2"
RT-4015	332.0	338.5	120.0	260.0	298.0	320.0	153.0	175.0	135.5	115.0	195.0	321.5	98.0	47.0	2"
RT-4015-1	332.0	338.5	120.0	260.0	298.0	320.0	153.0	175.0	135.5	115.0	195.0	321.5	98.0	47.0	2"
RT-4018-1	332.0	338.5	120.0	260.0	298.0	320.0	153.0	175.0	135.5	115.0	195.0	321.5	98.0	47.0	2"
RT-4019	332.0	338.5	120.0	260.0	298.0	320.0	153.0	175.0	135.5	115.0	195.0	321.5	98.0	47.0	2"
RT-4026	332.0	338.5	120.0	260.0	298.0	320.0	153.0	175.0	135.5	115.0	195.0	321.5	98.0	47.0	2"
RT-5026	383.0	416.5	125.0	290.0	332.0	370.0	154.0	195.0	160.0	140.0	180.0	362.0	120.0	50.0	2"
RT-6037	383.0	416.5	125.0	290.0	332.0	370.0	154.0	195.0	160.0	140.0	180.0	362.0	120.0	50.0	2"
RT-6046	383.0	416.5	125.0	290.0	332.0	370.0	154.0	195.0	160.0	140.0	180.0	362.0	120.0	50.0	2"
RT-7063	464.0	567.0	145.0	365.0	420.0	462.0	160.0	280.0	188.0	280.0	315.0	490.0	140.0	96.0	2 1/2"
RT-8086	464.0	567.0	145.0	365.0	420.0	462.0	160.0	280.0	188.0	280.0	315.0	490.0	140.0	96.0	2 1/2"
RT-9110	560.0	629.0	210.0	360.0	415.0	621.5	178.5	306.0	230.0	600.0	638.5	710.0	213.0	95.0	4"
RT-9150	560.0	629.0	210.0	360.0	415.0	621.5	178.5	306.0	230.0	600.0	638.5	710.0	213.0	96.0	4"
RT-9220	560.0	629.0	210.0	360.0	415.0	621.5	178.5	306.0	230.0	600.0	638.5	710.0	213.0	97.0	4"

Values in mm.

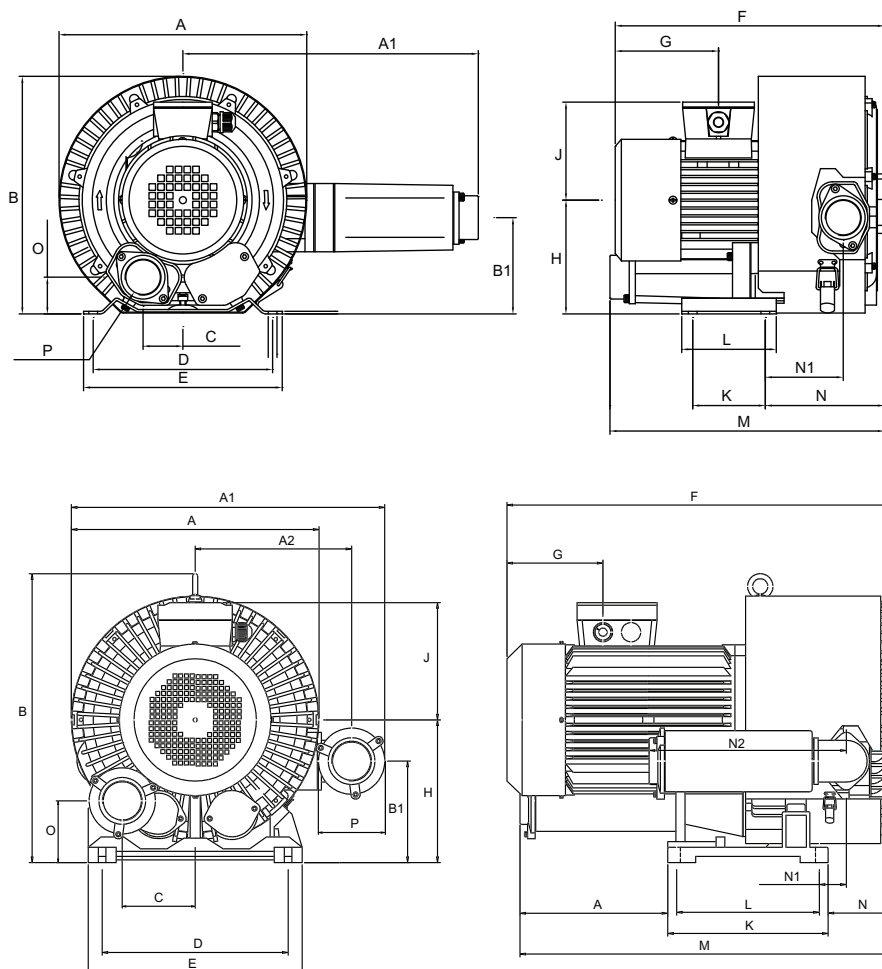
Drawings similar in design: Please contact our technical support for detailed drawings of your requested side channel blower.

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Dimensions double stage



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	A	A1	A2	B	B1	C	D	E	F	G	H	J	K	L	M	N	N1	N2	O	P
RT-23009	283.0	338.0	-	272.0	110.0	46.0	205.0	227.0	308.0	118.0	130.0	112.0	83.0	108.0	314.0	136.0	89.0	-	42.0	1 1/4"
RT-23009-1	283.0	338.0	-	272.0	110.0	46.0	205.0	227.0	308.0	118.0	130.0	112.0	83.0	108.0	314.0	136.0	89.0	-	42.0	1 1/4"
RT-33019	320.0	350.0	-	313.0	153.0	58.0	225.0	257.0	411.0	153.0	153.0	136.0	90.0	130.0	345.0	154.0	104.0	-	45.0	1 1/2"
RT-33019-1	320.0	350.0	-	313.0	153.0	58.0	225.0	257.0	411.0	153.0	153.0	136.0	90.0	130.0	345.0	154.0	104.0	-	45.0	1 1/2"
RT-33026	320.0	350.0	-	313.0	153.0	58.0	225.0	257.0	411.0	153.0	153.0	136.0	90.0	130.0	345.0	154.0	104.0	-	45.0	1 1/2"
RT-43037	369.0	443.0	-	374.0	140.0	60.0	260.0	298.0	458.0	154.0	175.0	160.0	115.0	155.0	407.0	170.0	110.0	-	47.0	2"
RT-43046	369.0	443.0	-	374.0	140.0	60.0	260.0	298.0	458.0	154.0	175.0	160.0	115.0	155.0	407.0	170.0	110.0	-	47.0	2"
RT-63046	424.0	454.0	-	417.0	158.0	62.0	290.0	332.0	467.0	154.0	195.0	160.0	140.0	180.0	459.0	206.0	132.0	-	50.0	2"
RT-63063	424.0	454.0	-	416.5	158.0	155.0	290.0	332.0	584.5	159.5	195.0	187.5	140.0	180.0	598.0	206.0	132.0	-	98.0	2"
RT-63086	424.0	454.0	-	416.5	158.0	155.0	290.0	332.0	584.5	159.5	195.0	187.5	140.0	180.0	598.0	206.0	132.0	-	98.0	2"
RT-83086	486.0	615.0	307.0	567.0	199.0	72.5	365.0	420.0	586.5	159.5	280.0	176.5	280.0	315.0	618.0	128.0	53.0	387.0	96.0	2 1/2"
RT-83130	486.0	615.0	307.0	567.0	199.0	143.0	365.0	420.0	758.0	189.0	280.0	230.0	280.0	315.0	733.0	260.0	128.0	387.0	121	2 1/2"
RT-83190	486.0	615.0	307.0	567.0	199.0	143.0	365.0	420.0	758.0	189.0	280.0	230.0	280.0	315.0	733.0	260.0	128.0	387.0	121	2 1/2"

Values in mm.

Drawings similar in design: Please contact our technical support for detailed drawings of your requested side channel blower.

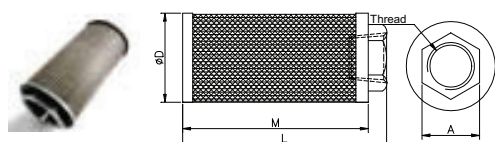
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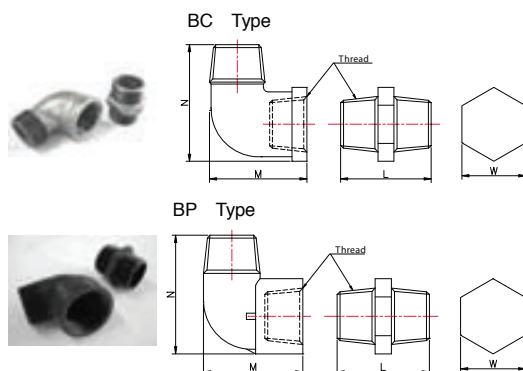
Accessories

Filter



Type	Thread	A mm	D mm	L mm	M mm	Filtration mesh	Flow l/min	Weight kg
MF-08	1"	42	58	170	155	100	110	0.20
MF-10	1 1/4"	54	71	186	170	100	210	0.35
MF-12	1 1/2"	65	85	196	182	100	285	0.49
MF-16	2"	75	103	215	202	100	395	0.65
MF-20	2 1/2"	97	148	274	252	100	750	1.20
MF-32	4"	142	208	380	357	100	1000	2.45

Elbow and Bend

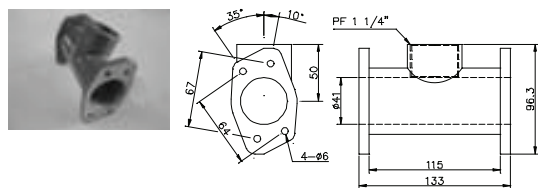


Type	Thread	L mm	M mm	N mm	W mm	Weight kg	Material
BC-10	1"	52	52	73	38	0.36	Cast Iron
BC-12	1 1/4"	56	65	90	47	0.57	Cast Iron
BC-15	1 1/2"	60	73	97	54	0.87	Cast Iron
BC-20	2"	67	85	120	65	1.30	Cast Iron
BP-20	2"	75	94	110	67	0.28	Plastic
BC-25	2 1/2"	76	105	137	82	1.86	Cast Iron
BC-40	4"	96	165	233	121	5.40	Cast Iron

Tee Pipe

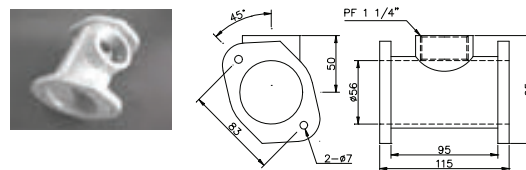
TP-01

Suitable for: RT-2, RT-3, RT-23, RT-33 series



TP-02

Suitable for: RT-4, RT-5, RT-6, RT-43, RT-63, RT-64 series



Adjustable Pressure & Vacuum Relief Valve



Type	Thread	Range mbar
PVC	RV-03	PF-1 1/4"
	RV-36	PF-1 1/4"
Aluminium	RV-A03	PF-1 1/4"
	RV-A36	PF-1 1/4"

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SIDE CHANNEL BLOWERS

Side Channel Blowers Selections Guide

Pressure

Model	0 mbar	50 mbar	75 mbar	100 mbar	125 mbar	150 mbar	175 mbar	200 mbar	225 mbar	250 mbar	300 mbar	350 mbar	400 mbar	450 mbar	500 mbar	550 mbar	600 mbar	700 mbar	max. value
	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
RT-1xxx	0.8	0.38	0.20																60 mbar = 0.25 m³/min
RT-2xxx	1.4	1.00	0.40	0.80	0.40	0.40													130 mbar = 0.22 m³/min
RT-3xxx	2.4	1.90	0.75	1.65	0.75	1.40	0.75												200 mbar = 0.35 m³/min
RT-4xxx	3.6	3.20	0.90	2.95	0.90	2.70	0.90	1.20	0.75	0.90	0.65	0.90	0.35	1.30					270 mbar = 0.35 m³/min
RT-5xxx	5.2	4.95	2.20	4.40	2.20	4.30	2.20	3.85	2.20	3.75	2.20	3.40	3.10	2.20	2.50				230 mbar = 2.60 m³/min
RT-6xxx	5.2	4.95	3.40	4.40	3.40	4.30	3.40	3.85	3.40	3.75	3.40	3.20	3.40	2.50	4.00				330 mbar = 0.75 m³/min
RT-7xxx	9.2	8.40	5.50	8.00	5.50	7.75	5.50	7.30	5.50	6.90	5.50	6.20	5.50	5.92	5.50	4.95	5.50		300 mbar = 4.00 m³/min
RT-8xxx	9.2	8.40	7.50	8.00	7.50	7.75	7.50	7.30	7.50	6.90	7.50	6.20	7.50	5.92	7.50	4.95	7.50		400 mbar = 1.80 m³/min
RT-9xxx	18.9	18.00	9.00	17.50	9.00	17.00	9.00	16.70	9.00	16.00	9.00	15.30	9.00	14.50	9.00	14.00	13.00	12.60	450 mbar = 5.00 m³/min
RT-23xxx	1.5	1.18	0.75	1.00	0.75	0.90	0.75	0.75	0.75	0.65	0.75	0.53	0.75	0.40	0.75	0.30	0.75		240 mbar = 0.16 m³/min
RT-33xxx	2.6	2.20	1.75	2.10	1.75	1.95	1.75	1.80	1.75	1.68	1.75	1.45	1.75	1.30	1.75	1.20	1.75		375 mbar = 0.32 m³/min
RT-43xxx	3.7	3.40	3.40	3.20	3.40	3.00	3.40	2.95	3.40	2.75	3.40	2.55	3.40	2.30	3.40	2.15	3.40	2.00	495 mbar = 0.60 m³/min
RT-63xxx	5.2	4.80	4.00	4.70	4.00	4.55	4.00	4.40	4.00	4.30	4.00	4.20	4.00	4.00	4.00	3.75	4.00	3.65	580 mbar = 1.15 m³/min
RT-83xxx	9.6	9.10	7.50	9.00	7.50	8.80	7.50	8.70	7.50	8.40	7.50	8.30	7.50	8.15	7.50	7.80	7.50	7.60	700 mbar = 2.40 m³/min

Values at 50 Hz.

Suction

Model	0 mbar	-50 mbar	-75 mbar	-100 mbar	-125 mbar	-150 mbar	-175 mbar	-200 mbar	-225 mbar	-250 mbar	-275 mbar	-300 mbar	-325 mbar	-350 mbar	-375 mbar	-400 mbar	-425 mbar	-450 mbar	max. value
	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	m³/min	
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
RT-1xxx	0.8	0.38	0.20																70 mbar = 0.18 m³/min
RT-2xxx	1.4	0.98	0.40	0.72	0.40	0.41	0.40												110 mbar = 0.22 m³/min
RT-3xxx	2.4	1.85	0.75	1.60	0.75	1.25	0.75	1.05	0.75	0.90	0.35	1.30							175 mbar = 0.35 m³/min
RT-4xxx	3.6	3.00	0.90	2.70	0.90	2.20	0.90	1.80	0.90	1.50	1.30	1.25	0.80	1.50					220 mbar = 0.45 m³/min
RT-5xxx	5.2	4.25	2.20	3.70	2.20	3.30	2.20	2.90	2.20	2.30	1.80	2.20	1.55	2.20	1.25	2.20			230 mbar = 1.20 m³/min
RT-6xxx	5.2	4.25	3.40	3.70	3.40	3.30	3.40	2.90	3.40	3.40	1.80	3.40	1.55	3.40	1.25	3.40	1.00	3.40	270 mbar = 0.45 m³/min
RT-7xxx	9.2	8.30	5.50	8.00	5.50	6.50	5.50	5.80	5.50	5.30	5.50	4.50	5.50	4.00	5.50	3.20	5.50	2.80	270 mbar = 2.00 m³/min
RT-8xxx	9.2	8.30	7.50	8.00	7.50	6.50	7.50	5.80	7.50	5.30	7.50	4.50	7.50	3.20	7.50	2.80	7.50	2.10	300 mbar = 1.50 m³/min
RT-9xxx	18.9	18.00	9.00	16.50	9.00	16.50	9.00	15.80	9.00	14.80	9.00	14.10	9.00	12.50	9.00	11.70	13.00	10.50	350 mbar = 3.20 m³/min
RT-23xxx	1.5	1.25	0.75	1.10	0.75	0.90	0.75	0.80	0.75	0.70	0.75	0.45	0.75	0.25	0.75				200 mbar = 0.25 m³/min
RT-33xxx	2.6	2.20	1.75	2.00	1.75	1.85	1.75	1.65	1.75	1.50	1.75	1.35	1.75	1.20	1.75	1.05	1.75	0.68	280 mbar = 0.25 m³/min
RT-43xxx	3.7	3.40	3.40	3.05	3.40	2.70	3.40	2.60	3.40	2.40	3.40	2.20	3.40	2.00	3.40	1.60	3.40	1.20	355 mbar = 0.40 m³/min
RT-63xxx	5.2	4.70	4.00	4.40	4.00	4.20	4.00	3.75	4.00	3.55	4.00	3.30	4.00	3.05	4.00	2.50	4.00	2.30	420 mbar = 0.80 m³/min
RT-83xxx	9.6	8.80	7.50	8.60	7.50	8.30	7.50	8.15	7.50	7.80	7.50	7.60	7.50	7.20	7.50	6.80	7.50	6.40	450 mbar = 1.20 m³/min

Values at 50 Hz.

All designs, dimensions and specifications are subject to change without notice (December 2008).

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