

**hibon**

# *Bareshaft Blowers*

**S2H Two Lobe Series**





# S2H Series Blowers

## Range

Range of positive displacement blowers featuring two lobes for use in compression and vacuum for air or neutral gases. Pressure up to 1 bar (14.5 psig) – Vacuum up to 540 mbar (16 "Hg)

## SN Series flow range by model:

S2H 22 to S2H 52 (BSP), S2H 22N to S2H 53N (NPT)  
From 15 m<sup>3</sup>/h (9 cfm) to 1590m<sup>3</sup>/h (935 cfm)  
S2H 62 to S2H 84 (NP 10)  
From 1030 m<sup>3</sup>/h (605 cfm) to 9400 m<sup>3</sup>/h (5529 cfm)

## Experience and know how

With almost a century of experience in the manufacture and the sale of rotary positive displacement blowers, Ingersoll Rand has a large range of two-lobe blowers specially designed to meet the demanding requirements of standard air or neutral gas applications: efficiency, competitiveness, and robustness.

This know-how ensures that the entire range of standard blowers benefits from the largest technological developments, allowing the user to obtain an optimum solution best suited to his needs..

## Benefits

High mechanical and volumetric efficiency  
Reliability in operation  
Air cooled, oil free operation  
Fast and easy maintenance  
Dynamically balanced impellers  
Detachable feet allow for vertical or horizontal flow  
Clockwise or counter-clockwise rotation  
Direct drive or V-belt drive available throughout the operating range

## Application

Thousands of international installations of Ingersoll Rand blowers are proof of their reliability and strength, providing universal solutions in wide-ranging applications such as:

- Water treatment
- Pneumatic conveying
- Combustion Air
- Centralized Cleaning
- Fluidization
- Homogenization
- Gas Compression



# Performance

S2H22 to S2H52 / S2H22N to S2H52N

Model	Maximum Inlet Flow		Max. Differential pressure		Max. Vaccum	
	m3/h	cfm	mbar	psig	mbar	"Hg
S2H 22	100	59	700	10.2	500	15
S2H 23	225	132	350	5.1	350	10.5
S2H 31	200	117	1000	14.5	500	15
S2H 32	300	176	700	10.2	500	15
S2H 33	525	309	350	5.1	350	10.5
S2H 41	280	165	1000	14.5	500	15
S2H 42	600	353	620	9	500	10.5
S2H 43	825	485	350	5.1	350	10.5
S2H 51	450	265	1000	14.5	500	15
S2H 52	650/900	382/529	620/550	9/8	500	15
S2H 63	3250	1912	750	10.9	500	15
S2H 64	5000	2941	600	8.7	500	15
S2H 83	6200	3647	750	10.9	500	15
S2H 84	9500	5588	600	8.7	500	15



# S2H 22 to S2H 52

## Features

**Casing:** Close grained cast iron. Ribbed for strength.

**Head-plates:** Close grained cast iron. Machined for accurate bearing location and impeller alignment.

**Rotors:** Cast iron with pressed-in steel shafts.

**Gears:** Ground and hardened alloy steel spur gears.

**Bearings:** Anti-friction bearings, retained at gear end to allow accurate setting of gear end clearance between head-plate and impellers.

**Lubrication:** Oil splash lubricated at gear end. Grease lubricated at drive end.

**Seals:** Single lip seals for air blowers and exhausters. For gas boosting, special seals are used.

**Motor start:** Direct on-line preferred. Star Delta starting possible providing that the machine is unloaded on start-up.

## Design

Part	European Designation	ASTM
Blower Body	EN GJL 200	A 48 gr 30 B
End covers	EN GJL 200	A 48 gr 30 B
Rotors	EN GJL 200	A 48 gr 30 B
Shafts	EN 10083-1-91/50CR V4	
Gears	CARBON STEEL 817 M 40	



# S2H 63 to S2H 84

## Features

**Casing:** Close-grained cast iron. Ribbed for strength.

**Head-plates:** Close-grained cast iron. Machined for accurate bearing location and impeller alignment.

**Rotors & Shafts:** Integral Ductile iron.

**Gears:** Ground and hardened alloy steel helical gears. Durable grip rings fasten gears to shaft and allow for quick and easy disassembly and re-timing.

**Bearings:** Large double-row anti friction spherical roller bearings, retained at gear end to allow accurate setting of gear end clearance between head-plate and impellers.

**Lubrication:** Oil splash lubrication at both drive and non-drive ends.

**Seals:** Nilos ring and piston rings with intermediate venting chamber. For gas boosting, special seals are used.

**Motor start:** Direct on-line preferred. Star Delta starting possible provided that the machine is unloaded on start-up.

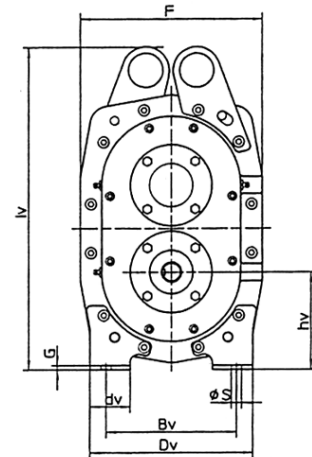
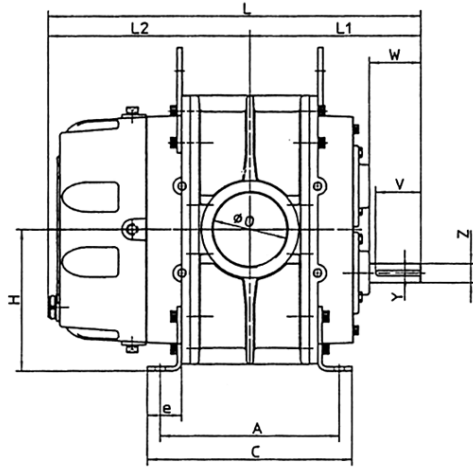
## Design

Part	European Designation	ASTM
Blower Body	EN GJL 200	A 48 gr 30 B
End covers	EN GJL 200	A 48 gr 30 B
Rotors	EN GJS 400-15	A 5 36-60-40-18
Shafts	EN GJS 400-15	A 5 36-60-40-18
Gears	CARBON STEEL 817 M 40	



# Dimensions

S2H 22 > S2H 53

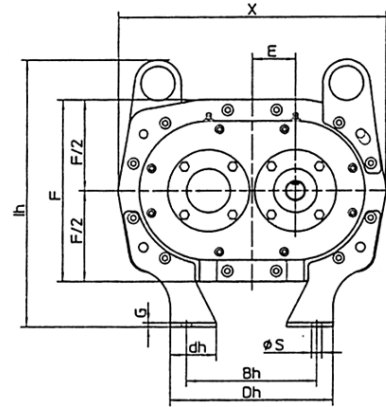
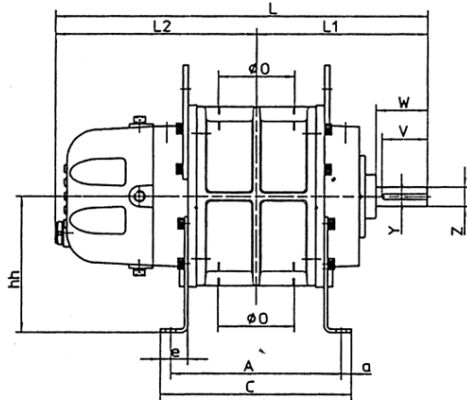


Blower Size	A	Bv	Bh	C	Dv	Dh	dv	dh	E	e	F	G	H
S2H22N	101	75	102	127	130	140	45	40	35	31.5	152	4	124
S2H23N	152	75	102	178	130	140	45	40	35	31.5	152	4	124
S2H31N	134	128	146	170	165	184	45	54	44.5	40.5	194	4	159
S2H32N	156	128	146	192	165	184	45	54	44.5	40.5	194	4	159
S2H33N	223	128	146	259	165	184	45	54	44.5	40.5	194	4	159
S2H41N	153	152	152	183	190	190	47	54	51	40	212	5	165
S2H42N	210	152	152	240	190	190	47	54	51	40	212	5	165
S2H43N	273	152	152	303	190	190	47	54	51	40	212	5	165
S2H51N	178	178	178	216	230	230	57	57	63.5	46	260	6	203
S2H52N	229	178	178	267	230	230	57	57	63.5	46	260	6	203

NOTE: All dimensions in millimeters unless otherwise noted

Blower Size	A	Bv	Bh	C	Dv	Dh	dv	dh	E	e	F	G	H
S2H22N	3.98	2.95	4.02	5.00	5.12	5.51	1.77	1.57	1.38	1.24	5.98	0.16	4.88
S2H23N	5.98	2.95	4.02	7.01	5.12	5.51	1.77	1.57	1.38	1.24	5.98	0.16	4.88
S2H31N	5.28	5.04	5.75	6.69	6.50	7.24	1.77	2.13	1.75	1.59	7.64	0.16	6.26
S2H32N	6.14	5.04	5.75	7.56	6.50	7.24	1.77	2.13	1.75	1.59	7.64	0.16	6.26
S2H33N	8.78	5.04	5.75	10.20	6.50	7.24	1.77	2.13	1.75	1.59	7.64	0.16	6.26
S2H41N	6.02	5.98	5.98	7.20	7.48	7.48	1.85	2.13	2.01	1.57	8.35	0.20	6.50
S2H42N	8.27	5.98	5.98	9.45	7.48	7.48	1.85	2.13	2.01	1.57	8.35	0.20	6.50
S2H43N	10.75	5.98	5.98	11.93	7.48	7.48	1.85	2.13	2.01	1.57	8.35	0.20	6.50
S2H51N	7.01	7.01	7.01	8.50	9.06	9.06	2.24	2.24	2.50	1.81	10.24	0.24	7.99
S2H52N	9.02	7.01	7.01	10.51	9.06	9.06	2.24	2.24	2.50	1.81	10.24	0.24	7.99

NOTE: All dimensions in inches unless otherwise noted. Imperial measurements are approximations based on the metric dimensions.

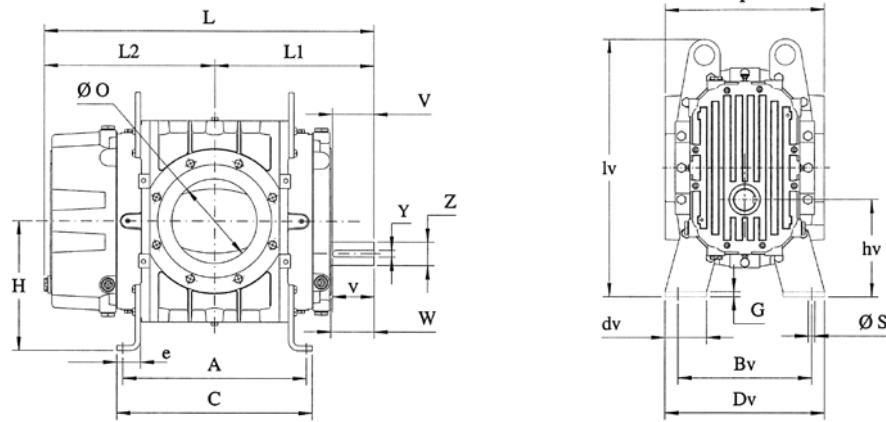


	hv	hh	lv	lh	L	L1	L2	O BSP (in.)	S dia	V	W	X	Y in.	Z in.	Weight kg
	89	95	280	216	260	113	147	1 1/4	10	34	38	222	3/16	5/8	19
	89	95	280	216	311	139	172	2	10	34	38	222	3/16	5/8	21
	114	127	335	264	314	146	168	1 1/2	10	54	60	283	3/16	5/8	34
	114	127	335	264	336	157	179	2	10	54	60	283	3/16	3/4	38
	114	127	335	264	402	190	212	3	10	54	60	283	3/16	3/4	48
	114	159	379	312	380	173	207	2	12	54	61	313	1/4	7/8	50
	114	159	379	312	437	202	235	3	12	54	61	313	1/4	7/8	60
	114	159	379	312	501	234	267	4	12	54	61	313	1/4	7/8	73
	139.5	178	465	368	479	196	283	2 1/2	12	54	60	387	5/16	1 1/8	95
	139.5	178	465	368	530	222	308	4	12	54	60	387	5/16	1 1/8	102

	hv	hh	lv	lh	L	L1	L2	O BSP (in.)	S dia	V	W	X	Y in.	Z in.	Weight lb
	3.50	3.74	11.02	8.50	10.24	4.45	5.79	1 1/4	0.39	1.34	1.50	8.74	3/16	5/8	42
	3.50	3.74	11.02	8.50	12.24	5.47	6.77	2	0.39	1.34	1.50	8.74	3/16	5/8	46
	4.49	5.00	13.19	10.39	12.36	5.75	6.61	1 1/2	0.39	2.13	2.36	11.14	3/16	3/4	75
	4.49	5.00	13.19	10.39	13.23	6.18	7.05	2	0.39	2.13	2.36	11.14	3/16	3/4	84
	4.49	5.00	13.19	10.39	15.83	7.48	8.35	3	0.39	2.13	2.36	11.14	3/16	3/4	106
	4.49	6.26	14.92	12.28	14.96	6.81	8.15	2	0.47	2.13	2.40	12.32	1/4	7/8	110
	4.49	6.26	14.92	12.28	17.20	7.95	9.25	3	0.47	2.13	2.40	12.32	1/4	7/8	132
	4.49	6.26	14.92	12.28	19.72	9.21	10.51	4	0.47	2.13	2.40	12.32	1/4	7/8	161
	5.49	7.01	18.31	14.49	18.86	7.72	11.14	2 1/2	0.47	2.13	2.36	15.24	5/16	1 1/8	209
	5.49	7.01	18.31	14.49	20.87	8.74	12.13	4	0.47	2.13	2.36	15.24	5/16	1 1/8	225

# Dimensions

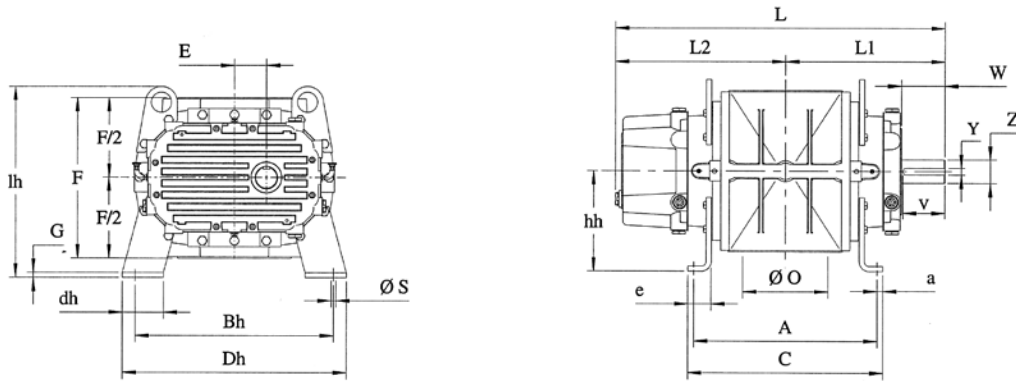
S2H 63 > S2H 84



Blower Size	A	a	Bv	Bh	C	Dv	Dh	dv	dh	E	e	F	G
S2H62	351	19	290	348	471	376	528	90	90	76.2	60	400	12
S2H63	586	18	290	442	624	376	528	90	90	76.2	60	400	12
S2H64	738	18	290	442	774	376	529	90	90	76.2	60	60	12
S2H82	464.4	24	290	442	604	480	683	110	110	101.6	70	480	12
S2H83	762	24	360	563	820	480	684	110	110	101.6	70	480	12
S2H84	962	24	360	563	1011	480	684	110	110	101.6	70	480	12

NOTE: All dimensions in millimeters unless otherwise noted

Blower Size	A	a	Bv	Bh	C	Dv	Dh	dv	dh	E	e	F	G
S2H62	13 7/8	3/4	11 3/8	13 3/4	18 1/2	14 3/4	20 3/4	3 1/2	3 1/2	3	2 3/8	15 3/4	1/2
S2H63	23	3/4	11 3/8	17 3/8	24 5/8	14 3/4	20 3/4	3 1/2	3 1/2	3	2 3/8	15 3/4	1/2
S2H64	29	3/4	11 3/8	17 3/8	30 1/2	14 3/4	20 7/8	3 1/2	3 1/2	3	2 3/8	2 3/8	1/2
S2H82	18 1/4	1	11 3/8	17 3/8	23 3/4	18 7/8	26 7/8	4 3/8	4 3/8	4	2 3/4	18 7/8	1/2
S2H83	30	1	14 1/8	22 1/8	32 1/4	18 7/8	27	4 3/8	4 3/8	4	2 3/4	18 7/8	1/2



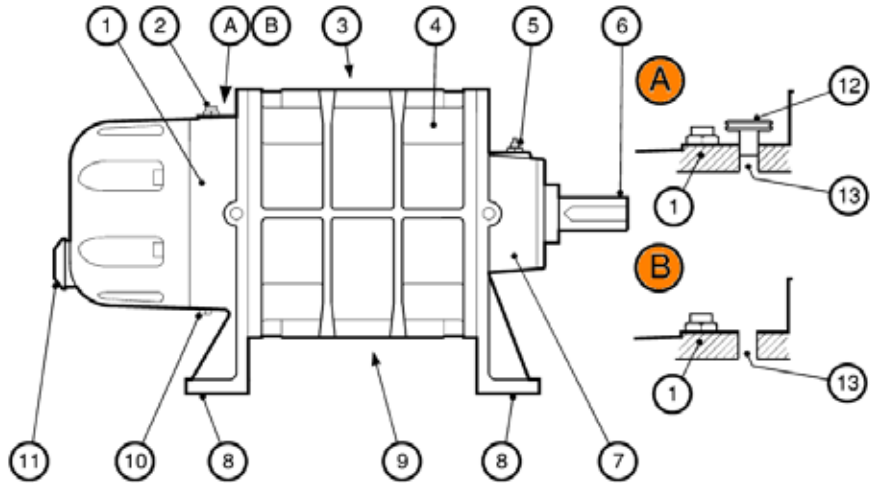
	H	hv	hh	lv	lh	L	L1	L2	O mm	S dia	V	W	Y	Z	Weight kg
	306.2	230	230	589	435	765	377	377	200	16	104	100	16	55	261
	306.2	230	230	589	589	927	454	454	200	16	100	104	16	55	320
	306.2	230	230	589	435	1080	530	530	250	16	100	104	16	55	470
	419.6	318	318	778	575	1021	515	515	250	20	166	165	20	75	550
	419.6	318	318	778	575	1235	618	618	300	20	165	165	20	75	665
	419.6	318	318	778	575	1438	719	719	300	20	165	165	20	75	270

	H	hv	hh	lv	lh	L	L1	L2	O mm	S dia	V	W	Y	Z	Weight lb.
	12	9	9	23 1/4	17 1/8	30 1/8	14 7/8	14 7/8	7 7/8	5/8	4	4	5/8	2 1/8	576
	12	9	9	23 1/4	23 1/4	36 1/2	17 7/8	17 7/8	7 7/8	5/8	4	4	5/8	2 1/8	706
	12	9	9	23 1/4	17 1/8	42 1/2	20 7/8	20 7/8	9 7/8	5/8	4	4	5/8	2 1/8	1036
	16 1/2	12 1/2	12 1/2	30 5/8	22 5/8	40 1/4	20 1/4	20 1/4	9 7/8	3/4	6 1/2	6 1/2	3/4	3	1213
	16 1/2	12 1/2	12 1/2	30 5/8	22 5/8	48 5/8	24 3/8	24 3/8	11 3/4	3/4	6 1/2	6 1/2	3/4	3	1466

# Part Descriptions

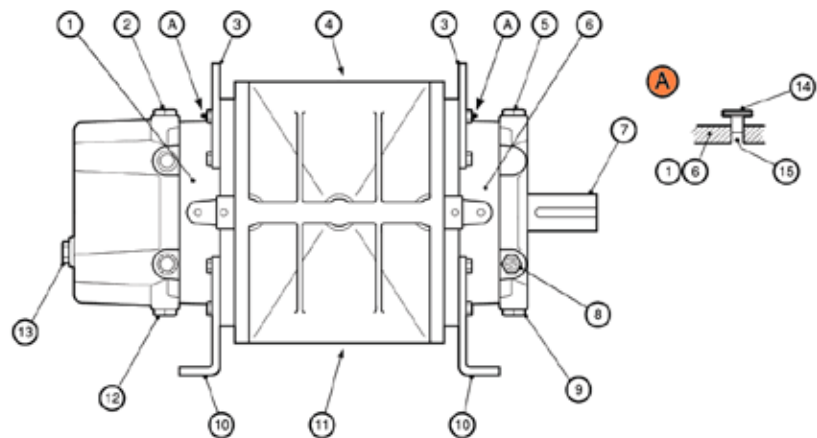
## S2H22 to S2H52 / S2H22N to S2H52N

1. Gear cover
  2. Oil filler plug
  - 3&9 Inlet/outlet
  4. Body casting
  5. Bearing greasing points
  6. Drive shaft
  7. Bearing cover
  8. Mounting feet
  10. Oil drain feet
  11. Oil level sight-glass
  12. External vent filter
  13. Gear cover vent port
- A** = Gear vent configuration  
**B** = Alternative gear cover vent configuration



## S2H63 to S2H84 / S2H63N to S2H84N

1. Gear end cover
  2. Oil filler plug (gear end)
  3. Lifting brackets
  - 4&11 Inlet/Outlet
  5. Oil filler plug (drive end)
  6. Drive end cover
  7. Drive shaft
  8. Oil level sight-glass (drive end)
  9. Oil drain plug (drive end)
  10. Mounting feet
  12. Oil drain plug (gear end)
  13. Oil level sight-glass (drive end)
  14. Vent filter
  15. Gear end/drive end vent
- A** = Gear end cover/drive end cover vent filters





*All repairs and service are done in conformity with the highest industrial standards and completed by a team of experienced technicians and engineers. IR embraces its responsibilities to operate in a manner that protects the environment and human health and safety in order to support the company's long-term growth and reputation as a responsible corporate citizen.*

#### **STANDARD EXCHANGE**

##### **Guarantee your production capability**

- Fast delivery: shipping of the exchange machine within one day
- Large range of machines ready to ship
- Performance certified as identical to your original machine
- 12-month warranty
- Price includes the return of your blower

#### **ON-SITE TECHNICAL SUPPORT**

##### **Bring our expertise to you**

- Service centers in France, England and Germany
- Installation, commissioning, service, and maintenance on-site
- Diagnostic and breakdown service
- Qualified technical service with the full support of our technical department

#### **SERVICE CONTRACTS**

##### **Maximize uptime**

- Keep costs under control
- Personal contract possibilities
- Scheduled maintenance
- Priority service in an outage
- Reduce downtime

#### **MAINTENANCE & SERVICE**

##### **To your original specifications**

- More than 100 years of technical and industrial experience
- Cleaning system keeping the component integrity
- Spare parts with supplier warranty (over 20 000 parts in stock)
- Available for standard service
- Guarantee on the quoted lead-time
- Similar test as a new machine
- Technical survey in link with our technical department
- Expertise and application recommendation available on demand



Ingersoll Rand Industrial Technologies provides products, services and solutions to enhance the efficiency and productivity of our commercial, industrial and process customers. Our innovative products include air compressors, air systems components, tools, pumps, material and fluid handling systems and microturbines.

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