

The logo for hibon, featuring the word "hibon" in a white, sans-serif font. A small red square is positioned above the letter "i".

hibon®

*Positive Displacement Blowers
& Vacuum Pumps
Twin Lobe Design & Tri Lobe Design*

The logo for Ingersoll Rand Industrial Technologies. It features a stylized "IR" inside a circle, followed by the text "Ingersoll Rand" and "Industrial Technologies" below it.

IR Ingersoll Rand
Industrial Technologies

More Than Air, Peace of Mind

*Ingersoll Rand is well into its second century of building our legacy as a **trusted** global leader by delivering the **innovative** solutions and **expertise** our customers require. We continue to advance compressed air technology and service to maximize reliability, efficiency and productivity for our customers.*

We not only provide world-class products and support, but the peace of mind that comes from our commitment to stand behind our customers in all aspects of what we do. That peace of mind allows our customers to focus on their primary objective: moving their businesses forward.

With experience dating back more than a century, HIBON with ISO-9001 certification, offers a world-class range of air blowers, compressors and vacuum pumps. On October 2, 2006, HIBON became part of Ingersoll Rand augmenting its leadership as a global provider of innovative and comprehensive compressed air solutions and services to diverse markets, as well as widening global distribution network. With a wide range of products, thousands of global installation references, HIBON products are ideally suited for various applications and form part of Ingersoll Rand Low Pressure Air Solutions.



Waster Water Treatment



Distillation



Coal



Pneumatic Conveying-
Petrochemical

S2H Series Blowers : Twin Lobe Design

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)

S2H Series flow range by model

S2H 22 to S2H 52 (BSP), S2H 22N to S2H 53N (NPT)

From 15 m³/h (9 cfm) to 1590 m³/h (935 cfm)

S2H 62 to S2H 84 (NP 10)

From 1030 m³/h (605 cfm) to 9500 m³/h (5530 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 the 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 solutions 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 | • Petrochemical |
| • Sewage Treatment | • Pharma |
| • Biogas | • Food Processing |
| • Cement | • Sugar |
| • Coal | • Metal Industries |
| • Textile | • Paper |
| • Power | • Glass |
| • Pneumatic Conveying | • Plastics |
| • Chemical | • Truck (Vacuum Applications) |



Pneumatic Conveying-Mining



Cement



Power



Chemical



Pharma

Performance

S2H22 to S2H84

Model	Maximum Inlet Flow m ³ /h	Flow cfm	Maximum Differential Pressure mbar	Pressure psig	Maximum Vacuum mbar	"Hg
S2H22	120	70	830	12	500	15
S2H23	255	150	485	7	470	14
S2H31	235	140	1000	15	540	16
S2H32	330	200	825	12	500	15
S2H33	615	360	480	7	480	14
S2H41	330	200	1000	15	540	16
S2H42	600	350	700	10	540	16
S2H43	930	545	480	7	470	14
S2H51	500	280	1000	15	540	16
S2H52	910	530	900	13	540	16
S2H53	1590	935	500	7	470	14
S2H62	2580	1650	1000	15	470	14
S2H63	3780	2250	800	12	550	16
S2H64	5060	3040	600	9	540	16
S2H82	4400	2815	900	13	540	16
S2H83	7050	4255	750	11	540	16
S2H84	9500	5590	600	9	540	16

Features

1. Twin Lobe Design
2. Four Bearings standard with drive shaft suitable for V-belt drive & direct drives
3. Bearing Life: 50,000 hours
4. Blower Packages include high efficiency reactive type silencers
5. Blower Package includes high efficiency suction filter & silencer



S2H22 to S2H53

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.

Materials

Part	EUROPEAN	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	CARBON STEEL 817 M 40



S2H62 to S2H84

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 : Lip seals 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.

Materials

Part	EUROPEAN	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	CARBON STEEL 817 M 40



SN Series Blowers : Tri Lobe Design

Ingersoll Rand offers a wide range of positive displacement, three-lobe blowers for use in compression and vacuum applications for air and other neutral gases. The SN Series can deliver pressures to 1,1 bar (16 psig) and vacuum up to 500 mbar (15 "Hg) with flow rates from 15 m³/h (10 cfm) to 13500 m³/h (7950 cfm)

Experience and know-how

With almost a century of experience in the manufacture and sale of rotary positive displacement blowers, Ingersoll Rand has a large range of three-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.

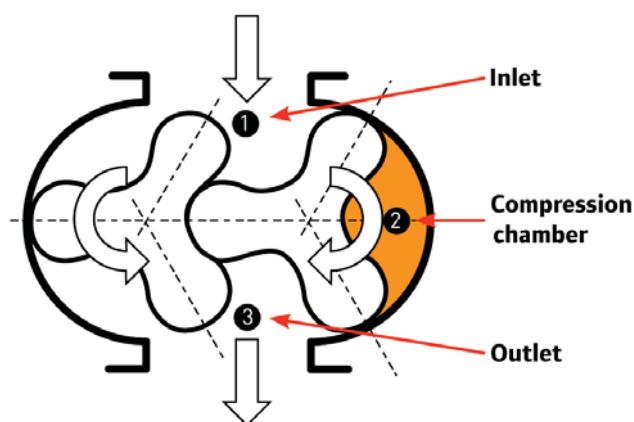
Benefits

- High mechanical and volumetric efficiency
- Reliability in operation
- Air-cooled, oil-free operation
- Fast and easy maintenance
- Dynamically balanced impellers
- Cast iron construction with a damper system to reduce noise and in-pipe pulsation
- 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
- Sewage Treatment
- Biogas
- Cement
- Coal
- Textile
- Power
- Pneumatic Conveying
- Chemical
- Petrochemical
- Pharma
- Food Processing
- Sugar
- Metal Industries
- Paper
- Glass
- Plastics
- Truck (Vacuum Applications)

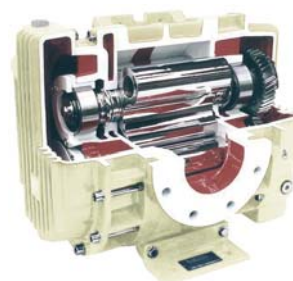


Materials

Part	AFNOR	ASTM	DIN	EUROPEAN
Impeller case	FGL 200	A 48 gr 30 B	GG 20	EN-GJL 200
Heat plate covers	FGL 200	A 48 gr 35 B	GG 25	EN-GJL 250
Impeller	FGL 400-15	A 536-60-40-18	GGG 40	EN-GJL-400-15
Shafts SN 803 to SN 822		A 536-60-40-18		EN-GJL-400-15
Shafts SN 870 to SN 8170	42 CD 4	A 322 gr 4142	17200	42 Cr Mo 4
Shafts for others models (MA)	XC 48	A 304 gr 1045 H		C 45 E
Gears	42 CD 4	A 322 gr 4142	17200	42 Cr Mo 4

Performance

Model	Maximum Inlet Flow m ³ /h	Maximum Inlet Flow cfm	Maximum Differential Pressure mbar	Maximum Differential Pressure psig	Maximum Vacuum mbar	Maximum Vacuum "Hg
SN 801	300	175	1000	15	500	15
SN 802	450	270	1000	15	500	15
SN 803	650	380	1100	16	500	15
SN 804	850	500	1000	15	500	15
SN 806	1250	735	1100	16	500	15
SN 809	2000	1175	900	13	500	15
SN 811	2300	1350	1000	15	500	15
SN 817	3150	1850	1000	15	500	15
SN 822	4300	2530	800	12	500	15
SN 825	3200	1880	1100	16	500	15
SN 842	5000	2940	930	13	500	15
SN 855	7000	4100	1100	16	500	15
SN 870	8000	4700	900	13	500	15
SN 890	9000	5300	900	13	500	15
SN 8110	11000	6500	600	9	500	15
SN 8170	13500	7950	850	13	500	15



Features

1. Tri Lobe Design
2. Bearings
 - Lifespan calculation done with ISO281 standard for 50 000 hours Lh10
 - Five bearings* for improved reliability
 - Suitable for all types of drive units including very compact transmissions
 - Heavy-duty roller bearing at shaft end
3. Sealing
 - Piston rings gas transfer and labyrinth, oil slingers ensure oil-free operation
4. Gears
 - SN blowers are fitted with helical** synchronised ground gears in accordance with ISO 6
 - Located at drive end for more input torque capability Max. Inlet Flow Max. Differential Pressure mbar (Psig) Max. Vacuum m /h cfm mbar psig mbar in. Hg
5. Oil lubrication at both ends
 - Two large-capacity cast iron oil casings
 - Fins on casings ensure proper oil cooling
6. Rotors
 - Three lobe design
 - Integral rotors shaft for models SN 803, SN 804, SN 806, SN 809, SN 811, SN817, SN 822 (index MA)
7. Body
 - Cast iron with damper system to reduce noise and in-pipe pulsation
 - Detachable feet*** allow mounting in vertical/horizontal mode
8. Conformity to EC safety standard
9. Blower Packages include high efficiency reactive type silencers
10. Blower Package includes high efficiency suction filter & silencer

* Except SN 801 and SN 802

** Blowers SN 801, SN 802, are fitted with spur gears located on driven end

*** Except SN 8170

Customer Support Center 1-800-233-7926
customersupport@ingersollrand.co.in
www.ingersollrand.co.in
www.ingersollrandproducts.com



Ingersoll Rand (India) Ltd.

21-30, GIDC Estate, Naroda, Ahmedabad - 382 330, India.

Phone : (079) 2282 0123, 2282 0323 • Fax : (079) 2282 1003, 2282 1256

E-mail : aircsolutionsindia@irco.com

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.

Ingersoll Rand compressors are not designed, intended or approved for breathing air applications. Ingersoll Rand does not approve specialized equipment for breathing air applications and assumes no responsibility or liability for compressors used for breathing air service.

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Regional Headquarters' Phone Numbers • WEST - Mumbai : (022) 61540500, Nagpur : (0712) 2533697/2533386, Pune : (020) 25619000
Surat : (0261) 3917335/2350065, Indore - (0731) 2435622, Raipur - (0) 9370806664 • **EAST** - Kolkata : (033) 24011224/24014258
Jamshedpur : (0657) 2233128/129 • **SOUTH** - Bangalore, Karnataka : (080) 22166001, Chennai, TN & Kerala : (044) 28523362/28520900
Coimbatore : (0) 9344601020 Secunderabad, AP : (040) 27849813/16/24 • **NORTH** - Chandigarh : (0172) 3247151/2664334
New Delhi : (011) 40511300, Haridwar : (0) 9358631990