



SA series – Screw Air Compressor

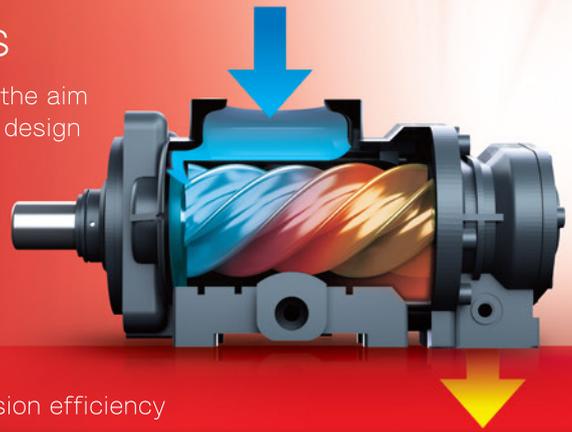
SA08 - 200 Standard series

SA08 - 160 Plus premium series



High Efficiency Airend Induce Air Flow from Axial and Radial directions

- Fusheng's global R&D center in Germany is established with the aim to improve gear profile, volume efficiency and energy saving design and increase operating efficiency at low rpm.
- The axial air intake and exhausting design reduces axial imbalance effectively, and brings the following advantages for airend design:
 - ▶ Lower operational noise level
 - ▶ Longer service life of airend and bearings.
 - ▶ Fully utilize effective rotor length to maximize the compression efficiency



Highly Efficient Design



Intake valve

One valve serves as non-return valve, shut-off valve and modulation control valve (optional). The low pressure drop design optimizes air intake efficiency. The compressor adjusts itself automatically with the actual need for compressed air as it operates, allowing for more accurate control of unload pressure and thus greater energy efficiency.



Independent bearing

No more bearing lubrication by oil from secondary oil return pipe. The bearings are now lubricated by independent lubrication line. With the independent oil filter, the cleanness of lubricant is ensured.



All end faces sealed to completely remove the leakage

An environment-protective zinc-connector is mounted for connection and the end faces are sealed to completely remove the leakage.

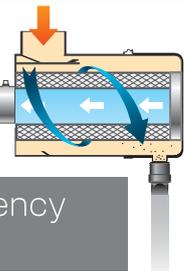


Vibration reducing device

The vibrations are reduced efficiently as the compressor is operating. It also prevents the propagation of low-frequency noises through resonance of solid objects while prolonging the compressor's service life.

IoT smart real-time service system (optional)

The IoT compressor management system in the cloud platform realizes the unification of monitoring, malfunction diagnosis and servicing in one package. The messages of compressor malfunction and real-time status are sent to the designated professionals by SMS and email.



Safe and high-efficiency air filter system

- The big particle size of dust in the vacuumed air will follow the air whirl and fall into the rubber slot at front end of air filter casing instead of attaching to clog the surface of filtration core.
- The long service life filtration core is designed with large filtration area and smaller resistance against air suction to ensure that the pure air whirl is without impurities.
- The independent air intake and filtration path allows the colder air is sucked directly from the outside, making the air intake denser for better efficiency.

Eco- and User-friendly idea

IE3 electric motor is used for all SA series screw compressor. It gives the compressor greater performance and better energy efficiency.

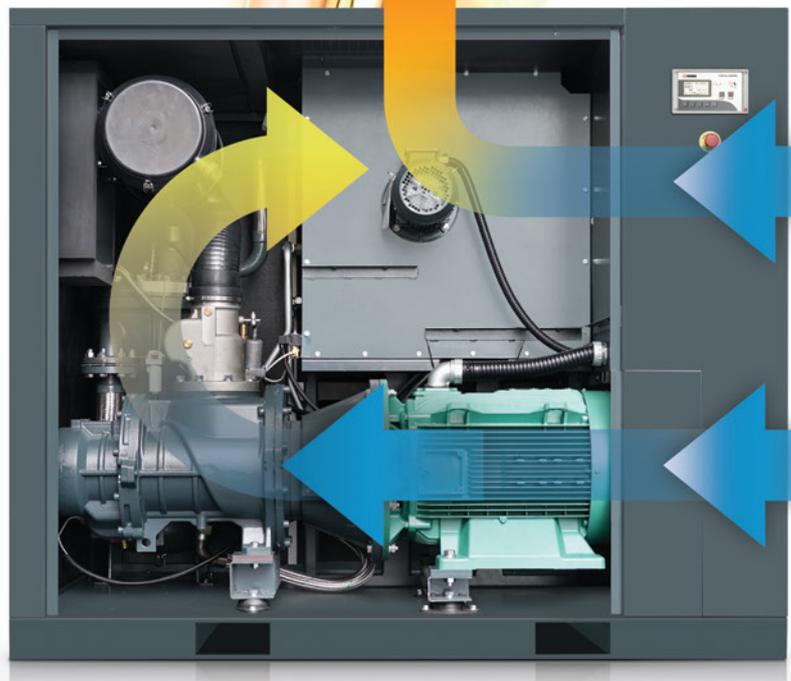


Unique cooling flow field for silence and efficiency

- With the centrifugal fan, cold air is sucked in directly from outside to cool the cooler, and hot air is dissipated out from the top; With the greater heat transfer surface, the cooler ensuring excellent cooling effect.
- During cooler cleaning, simply remove the cover without dismantle the air duct and doors.
- In the electric control box, the colder air is drawn in directly to ensure the best heat dissipation.
- Independent air intake line in the motor ensures that colder outside air is drawn to the motor directly, and a silencing design is added at the intake port.
- For water-cooled models, heavy duty tube cooler is introduced for its large capacity and outstanding cooling effects, perfect for high-temperature environment.
- The compressed air flows through the line smoothly with virtually no pressure drop. Water flows through the inner tube and air in outer tube. The straight-through design makes cleaning very easy.



- Dual fan design, one or two fans are activated depending on the ambient temperature. This design is equivalent to the combination of cooling fans and additional “mechanical frequency inversion.” (available for 90kW series above)



Better noise control

Noise control is performed better now in SA series. Low-noise design is introduced to air filtering, independent air intake line of motor and cooling fans in addition to highly efficient vibration reducing device. Noises are minimized from the source.

Highly efficient, easy-to-maintain oil separator

- ▶ The supersized oil separator design features a large separation area that reduces the pressure drop during the air/oil separation while providing better filtration, thus making the compressed air system more efficient.
- ▶ A patented rotating shaft design is adopted on the separator cover. The replacement of oil separator is made much easier.

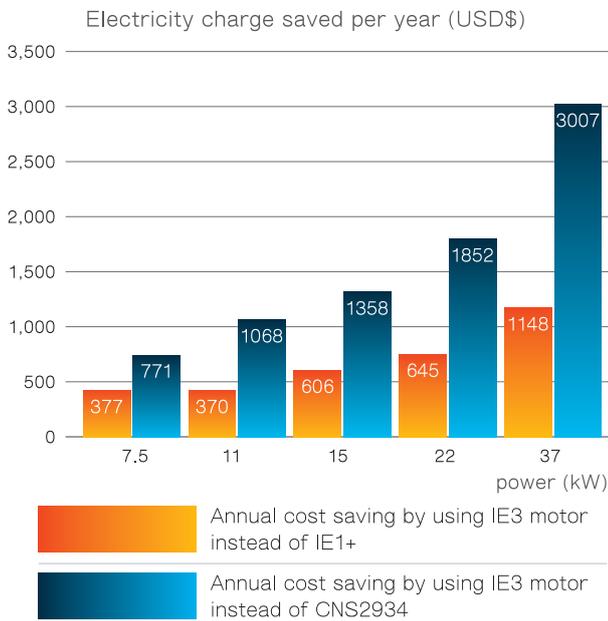


IE3 Ultra-efficient Motor



The combination of brand-new SA series and the IE3 ultra-efficient motor means not only full-scale performance improvement but also significant reduction in operating costs.

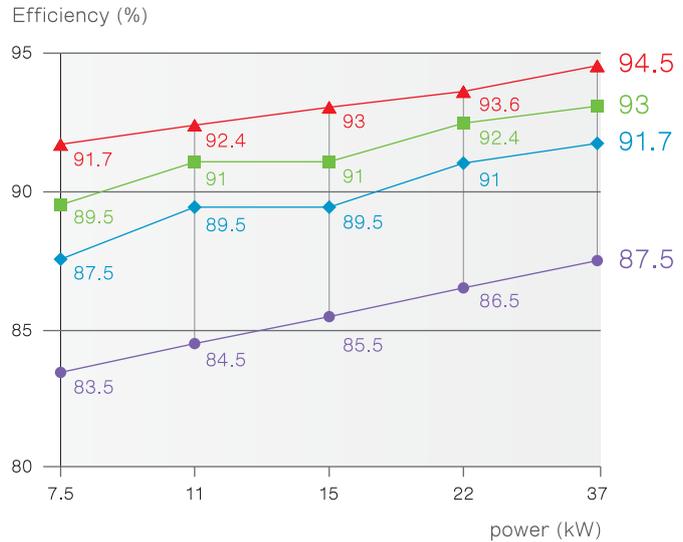
Benefit of using IE3 Motor



Comparing to air compressor 10 years ago (37kW), by using IE3 motor could save about USD\$ 3,007 in electricity charge per year; Comparing to air compressor with IE1+ motor, by using IE3 motor could save about USD\$ 1,148 in electricity charge per year.

*Based on 8000 operation hours per year, 1kWH=USD\$ 106 Cents.

Differences in efficiency of various grade of motors



CNS2934 is the standard of old version for 3-phase squirrel cage induction motor.

Premium Efficiency Air Compressor

SA PLUS Fusheng base-load compressor with optimized solution applied can save the operating cost by 22%

37kW air-cooled air compressor specific power vs. operating cost

Difference in operating cost by using different grade of efficiency based on: discharge air pressure 7kg/cm², 8,000 hours operation per year, 1kWH=USD\$ 106 Cents.



37kW air-cooled air compressor - specific power (kW/m³·min⁻¹)

Cost saved from continuous operation for five years

Base-load compressor - The operating cost saved from using the compressors of Grade 1, Grade 2 and Grade 3 efficiency respectively.

(USD\$)

Cumulative year of operation	Grade 1 compressor operating cost	Grade 2 compressor operating cost	Grade 1-2 compressor operating cost	Grade 3 compressor operating cost	Grade 1-3 compressor operating cost
1 year	37,330	41,722	4,392	45,564	8,234
2 years	74,660	83,444	8,784	91,128	16,468
3 years	111,990	125,166	13,176	136,692	24,702
4 years	149,320	166,888	17,568	182,256	32,936
5 years	186,650	208,610	21,960	227,820	41,170

※ Difference between Grade 1 and 2 = Operating costs of Grade 2 performance machine - Operating costs of Grade 1 performance machine

※ Difference between Grade 1 and 3 = Operating costs of Grade 3 performance machine - Operating costs of Grade 1 performance machine

For compressors of the same specs, a 37kW Fusheng Grade 1 performance air compressor can save up to USD\$ 4,392 per year of power bills as opposed to a typical Grade 2 performance compressor and up to USD\$ 8234 per year as opposed by a typical Grade 3 performance compressor. The more horsepower the compressor has, the more it saves.

Intelligent Controller



Simplicity Ingenuity Reliability

Operation messages

- Remote control status
- Alarm history record
- Malfunction history record
- Discharge air pressure/temperature
- Number of load/unload changeover time
- Total running time/total load time
- Motor current display (standard unit)
- Fan current display
- Main power supply voltage display (standard unit)
- Main motor power consumption percentage, frequency percentage display (exclusive for VSD type)

Features and functions of AIMS Plus controller

- freeze-proofing and no-load running protection function
- Alarm/trip history record in consecutive 30 entries for maintenance and service inquiry
- Monitoring main motor current function
- Monitoring fan current function
- Setting shutdown time due to unload too long function
- Selection for auto start after resetting power failure function

Fault messages inquiry

- Trip by phase sequence protection
- Malfunctioning pressure transmitter
- Trip by discharge air temperature alarm failure
- Trip by too high discharge air temperature/pressure
- Trip by abnormal discharge air pressure upper/lower limit
- Trip by motor/fan overload
- Input power supply protection

Service & maintenance prompts

- Motor service & maintenance time
- Compressor service & maintenance time
- Oil filter service & maintenance time
- Lubricating oil service & maintenance time
- Belt service & maintenance time
- Oil fine separator service & maintenance time
- Air filter service & maintenance time

Load management (Applicable to standardised fix-speed model)

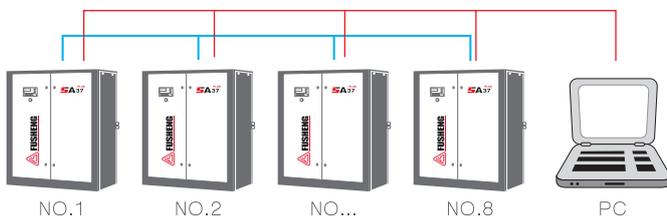
- High expandability, interlock control is available up to 8 compressor units; no need to externally add the interlock box and system pressure transmitter.
- Joint control for multiple compressors to ensure a pressure difference <0.2 bar at each compressor.
- Equipped with MODBUS communication function that can achieve the most effective load management at the least cost and monitor the running status of each compressor just by linking RS485 with a two-core shielded wire (2-wire type)
- Sequence start-up, unloading and switchover time setting
- Disconnection of joint control for multiple compressors will self-enable the area network control function to ensure a stable air supply.

Controller display

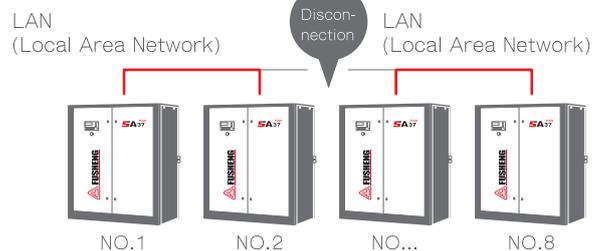
- Simple and easy-to-operate human-machine interface
- Language selection:
English/Traditional Chinese/Simplified Chinese/Portuguese/Spanish

Remote monitoring (Solution 1)

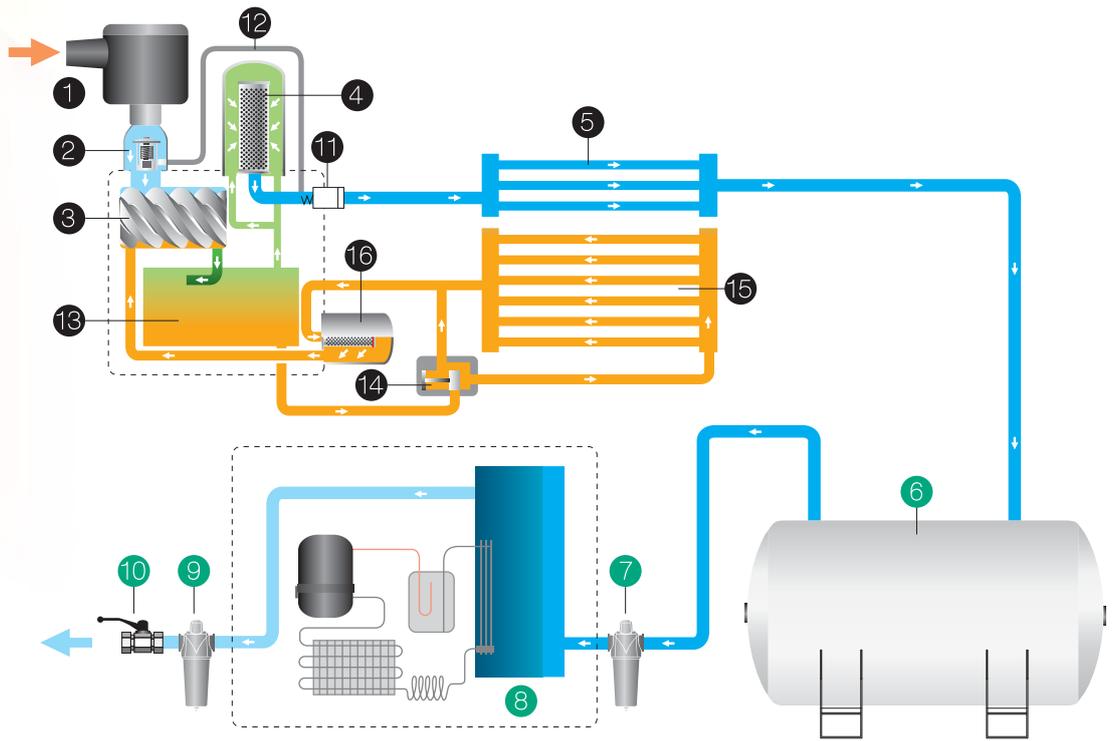
Multiple compressors interlock control function (Solution 2)



LAN(Local Area Network) control function



System flow chart



08-11

Air Flow

- ① Air filter
- ② Air inlet valve
- ③ Air compressor aierend
- ④ Oil fine separator
- ⑤ After cooler
- ⑥ Air receiver (Optional)
- ⑦ Precision filter (Optional)
- ⑧ Refrigeration dryer (Optional)
- ⑨ Post precision filter (Available if required)
- ⑩ Compressed air outlet valve (Optional)
- ⑪ Minimum pressure valve (MPV)
- ⑫ Air inlet control piping

Oil Flow

- ⑬ Air/Oil separator tank
- ⑭ Thermal control valve
- ⑮ Oil cooler
- ⑯ Oil filter

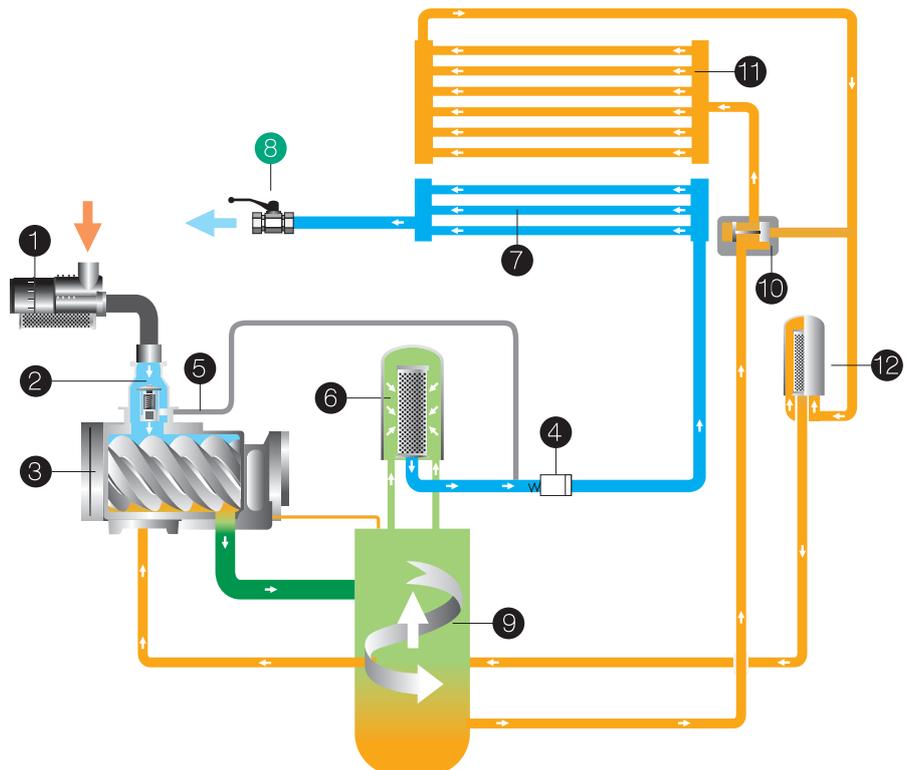
15-37

Air Flow

- ① Air filter
- ② Air inlet valve
- ③ Air compressor aierend
- ④ Minimum pressure valve (MPV)
- ⑤ Air inlet control piping
- ⑥ Oil fine separator
- ⑦ After cooler
- ⑧ Air outlet valve (Optional)

Oil Flow

- ⑨ Air/Oil separator tank
- ⑩ Thermal control valve
- ⑪ Oil cooler
- ⑫ Oil filter



Specification



SA standard series

Air Compressor

SA08-37

Configuration specifications

● Standard ○ Optional ✗ Not available

Model	compressor	Dryer	Precision filter	Air receiver	inverter
SA	●	✗	✗	✗	✗
SA-R	●	●	○	✗	✗
SA-P	●	✗	✗	●	✗
SA-F	●	●	○	●	✗

Model	Working pressure	Delivery	Main motor power		Voltage	Lubricating oil volume	Compressed air outlet	Length	Width	Height	Weight	Noise
	barG	m ³ /min	kW	HP	V	Liter	inch	mm	mm	mm	kg	dB(A)
50Hz / 60Hz												
SA08	7	1.27	7.5	10	380	7.5	G 3/4	800	670	1100	275	64
SA08-R	8	1.18									358	
SA08-P	10	0.99									415	
SA08-F	12	0.8									498	
SA11	7	1.82	11	15	415	7.5	G 3/4	1545	670	1710	285	65
SA11-R	8	1.7									368	
SA11-P	10	1.52									425	
SA11-F	12	1.35									508	
SA15	7	2.5	15	20	220	15	G1	1250	880	1515	610	71
	8	2.3										70
	10	2.1										72
SA22	7	3.9	22	30	440	15	G1	1250	880	1515	670	71
	8	3.7										70
	10	3.2										73
SA37	7	6.6	37	50	440	18.5	G1 1/2	1350	940	1680	865	72
	8	6.3										71
	10	5.6										70
	12	4.9										70

*Noise value is measured pursuant to ISO 2151.

SA series - Screw Air Compressor

SA08 - 200 Standard series
SA08 - 160 Plus premium series

SA55-200

Model	Working pressure	Delivery	Main motor power		Voltage	Lubricating oil volume	Compressed air outlet	Length	Width	Height	Weight	Noise	
	barG	m ³ /min	kW	HP	V	Liter	inch	mm	mm	mm	kg	dB(A)	
50Hz													
SA55A	7	10.3	55	75	380	39	G2	2000	1250	1750	1640	74	
	8	9.7											
SA55W	10	8.7											1690
	12	7.8											
60Hz													
SA55A	7	10.3	55	75	220	52	G2	2180	1330	1850	2025	75	
	8	9.7											
SA55W	10	8.7											2013
	12	7.8											
50Hz	60Hz												
SA75A	7	14	75	100	380	52	G2	2180	1330	1850	2025	76	
	8	12.8											
SA75W	10	11.8											2013
	12	10.6											
SA90A	7	16.4	90	125	415	52	G2	2180	1330	1850	2700	75	
	8	15.4											
SA90W	10	14.1											2600
	12	12.6											
SA110A	7	21.0	110	150	380	80	3"Flange	2740	1710	1725	3000	76	
	8	20.0											
SA110W	10	17.0											2900
	12	15.3											
SA132A	7	25.2	132	175	415	220					3500	77	
	8	23.2											
SA132W	10	21.0											3400
	12	18.3											
SA160A	7	29.2	160	215	440						3700	78	
	8	27.9											
SA160W	10	24.6											3600
	12	21.9											
SA185A	7	32.6	185	250	220	120	4"Flange	2900	1860	1945	3750	79	
	8	30.4											
SA185W	10	27.6											3650
	12	25.3											
SA200A	7	35.2	200	270	440						3750	80	
	8	33.7											
SA200W	10	30.3											3650
	12	27.7											

* Noise level is measured according to ISO 2151

Improvement of Overall Efficiency Optimization of Cost Savings



Specification

SA^{PLUS} Premium Efficiency Air Compressor

Model	Working pressure	Delivery	Main motor power		Voltage	Lubricating oil volume	Compressed air outlet	Length	Width	Height	Weight	Noise										
	barG	m ³ /min	kW	HP	V	Liter	inch	mm	mm	mm	kg	dB(A)										
60Hz																						
SA08 ^{PLUS}	7	1.27	7.5	10	220 380 440	7.5	G $\frac{3}{4}$	800	670	1100	275	64										
	8	1.18																				
SA11 ^{PLUS}	7	1.82	11	15							15	G 1	1250	880	1515	610	71					
	8	1.7																				
SA15 ^{PLUS}	7	2.5	15	20												18.5	G1 $\frac{1}{2}$	1350	940	1680	795	72
	8	2.3																				
SA22 ^{PLUS}	7	3.9	22	30		37	50	2180	1330	1850											2070	76
	8	3.7																				
SA37 ^{PLUS}	7	6.6	37	50							52	G 2	2900	1860	1945						4350	81
	8	6.3																				
SA75 ^{PLUS}	7	14.0	75	100												120	4"Flange	2900	1860	1945	4350	81
	8	12.8																				
SA110 ^{PLUS}	7	21.0	110	150	220 380 440	7.5	G $\frac{3}{4}$	800	670	1100											275	64
	8	20.0																				

* Noise level is measured according to ISO 2151

* SA55^{PLUS} / SA160^{PLUS} or other models requirement, please contact our sales rep.



SA series - Screw Air Compressor

SA08 - 200 Standard series

SA08 - 160 Plus premium series

FUSHENG INDUSTRIAL CO., LTD

HEAD OFFICE

No.172, Sec. 2, Nanjing E. Rd., Zhongshan Dist.,
Taipei City 104, Taiwan (R.O.C.)
TEL : +886-2-2507-2211 FAX : +886-2-2504-7870

FACTORY(SALES OFFICE)

No.60, Sec. 2, Guangfu Rd., Sanchong Dist.,New Taipei City 241,
Taiwan (R.O.C.)
TEL : +886-2-2995-1411 FAX : +886-2-2995-7925

FUSHENG (VIETNAM)

No. 6, Street 3A, Bien Hoa Industrial Zone II,
Bien Hoa, Dong Nai Province, Vietnam.
TEL:+84-61-383-4566 FAX:+84-61-383-4599
E-Mail : sales@fusheng.com.vn

FUSHENG (THAILAND)

89/16 Moo. 5, Bangna-Trad Road , Bangsarmark,
Bangpakong, Chachoengsao 24180, Thailand.
TEL:+66-3-808-6789 FAX:+66-3-808-6757
E-Mail : fs.compressor@fusheng.thailand.com

Web site : www.fusheng.com
E-Mail : machinery.sc@fusheng.com

FUSHENG (MALAYSIA)

No.08 Jalan Para U8/103, Metropolitan
Business Park, Seksyen U8, 40150
Shah Alam, Selangor, Malaysia
TEL :+60-3-7832-3952 FAX :+60-3-7832-1954
E-Mail : fsmy_sales@fusheng.com

FUSHENG (INDONESIA)

Taman Tekno Blok H-9 / 23-25,
Bumi Serpong Damai Sector XI,
Tangerang 15314, indonesia
TEL:+62-21-2275-6671 FAX:+62-21-2275-6672
E-Mail : info.indonesia@fusheng.com



Distributor/Sales Representative



SA(PLUS)08~200-10510-112A000-E2