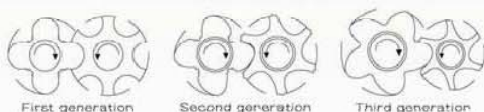
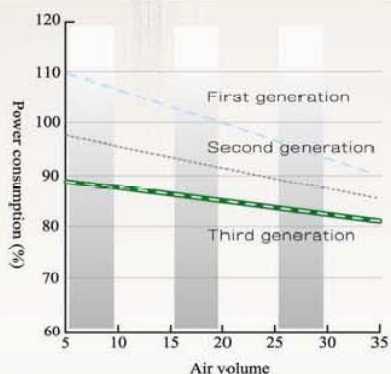


We Strive For Your  
Absolute Confidence



Efficiency comparison for different generations of air-end rotor profiles



### THIRD GENERATION SCREW AIR-END

#### ► Features

Asymmetrical, 5-lobe-6-flutes rotor profile machined to the highest accuracy not only ensures reduced differential pressure between lobe and flute, but also assures lowest possible backflow. Adiabatic efficiency is increased by 10-12%, which translates into 25% energy saving, as compared to the 4-lobe-6-flutes rotor profile.

#### ► High Precision Machining Equipments

Highly specialized, most advanced machining and control equipments enable rotor machining/grinding accuracy to 0.005 mm, with roughness allowance (Ra) of 0.1-0.2  $\mu\text{m}$ .

#### ► Outstanding Design

Large in size, with low running rpm, Fusheng screw air-ends are more efficient and deliver more compressed air for the same driving power. Bearing design life can be assured by minimum vibrations and bending stress of the air-end.

#### ► Air-end rotor profile patent

USA NO. 4,890,992  
UK NO. 2,230,563  
Japan NO. 2,008,216  
China NO. 82821



German KLINGELNBERG rotor grinding machine



Japanese housing CNC machining center



German KAPP rotor grinding machine



CNC machining center



Five axis machining center



German LEITZ 3D control/measuring equipment

Screw Air Compressors  
**SA Series**



**COOLING SYSTEM**

Highly efficient, low noise electrical fan for most effective cooling results



**AIR FILTER**

Special paper media cartridge, easy filter change-out, convenient maintenance, absolute protection of downstream components, long service life

**ANTI VIBRATION**

Effective reduction of operation vibrations and prevention of the low frequency noise transmission is achieved with anti-vibration pads



**OIL FILTER/THERMO-STATIC VALVE**

Design of "two in one" unit enables easy and convenient maintenance



**OIL RECEIVER**

Special internal structure design enables flow enables constant flow and effective oil separation



**INTELLIGENT CONTROL SYSTEM**

Effective operational control is crucial for smooth, reduced cost operation. Fusheng S A-series compressors are equipped with intelligent, microchip control units that are simple and user friendly designed. Control system optimizes performance and monitors wide range compressor parameters



**FINE OIL SEPARATOR**

Micro glass fiber layers separation process is effective down to sub micron range. The residual of the compressed air is controlled within 3mg/m<sup>3</sup> (3ppm)

**OIL FILTER**

Filter unit combining economy and environmental friendliness with high functionality and efficiency is protecting complete compression system; easy servicing and high level of reliability and environment protection are the key concepts



# INTELLIGENT CONTROL SYSTEM

Simplicity Ingenuity Reliability



## Characteristics

- Simple, intelligible operating
- Instantaneous operation/warning signal and indication
- Remote start/stop control function mode
- Recording all operational malfunction situations for easy periodical maintenance and repair
- Preset automatic start/stop function
- Automatic re-start after an electric power cut function
- Password protection against unauthorized manipulation
- Maximum 16 compressor units interlock control capability
- MODBUS conventional communication v capability to connect to any type of central monitoring system

## Consumable Parts Operating Hour Display

- Air filter running hours
- Belts running hours
- Lubricant running hours
- Oil filter running hours
- Oil fine running operating hours
- Air-end running hours

AIR FILTER  
1520hr

## Operating Conditions /Hours Display:

- Discharge pressure/temperature
- Load/unload pressure setting value
- Present date/time
- Total operating hours/total load operating hours
- Compressor serial production number
- Input/output

DISCHARGE P/T  
7.0 kg/cm<sup>2</sup>  
74°C  
LOAD

## Warning/Trip Signal Display

- Air filter element clogging
- Oil fine separator clogging
- Oil filter element clogging
- Discharge temperature lower/upper limit warning
- Discharge pressure lower/upper limit warning
- Main motor, cooling fan motor overload trip
- High temperature/pressure trip
- Phase protection trip
- Motor high temperature protection trip
- Cooling water loss switch trip
- Oil loss warning

AIR FILTER  
CLOGGED  
OIL SEPARATOR  
NORMAL

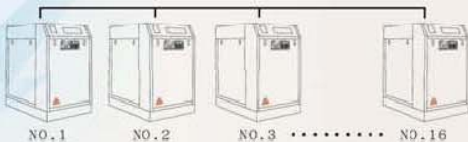
## Malfunction Recording

- Air filter element clogging
- Oil fine separator clogging
- Oil filter element clogging
- Electrical malfunction
- High discharge temperature trip
- High discharge pressure trip
- Phase protection trip
- Cooling water loss switch trip
- Oil loss warning

ALARM  
AIR FILTER CLOG  
2006/03/02  
17:05:30

## 16 Compressor Unit Interlock Control Capability (option)

- Expendability**  
Increasing a compressor unit in the system, additional interlock control box or system pressure sensor is not required
- Simple and easy function setting.**  
Compressor in the system requires interlock control values and parameters input
- Achieving best loading control with lowest cost**  
Each compressor unit only requires RS-485 wire connection



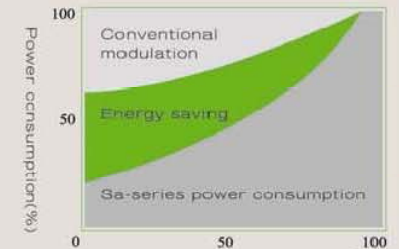
## SC80A3 Control Unit Functions Capability

- 20 continuous warnings/trips records
- 8 sets of operating condition input/output connectors enhance remote control function capability (operating status, joint warning, joint trip, load status, prolong unload condition auto stop, external connection signal, start connector, stop connector)
- Consumable parts replacement records enable client and service agent to have detailed periodical replacement and maintenance information



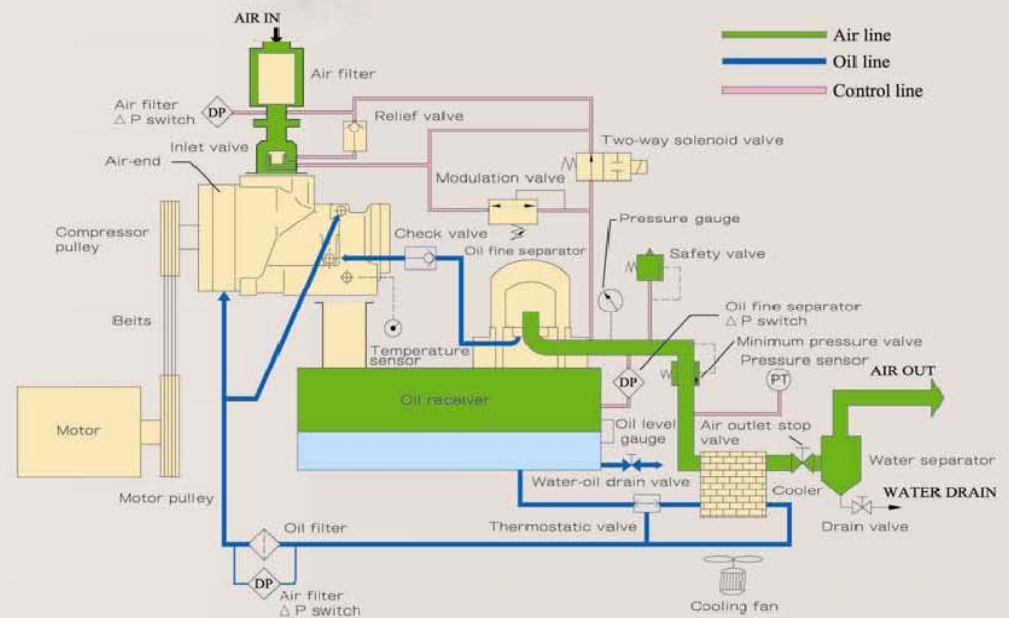
Screw Air Compressors  
**SA Series**

## Energy saving modulation control 0~100%(option)



Automatic adjustment of required power consumption, according to actual air demand conditions

## SA11A~SA37A System Flow Chart





### HIGH PRECISION MACHING EQUIPMENTS

Highly specialized, most advanced machining and control equipments enable rotor machining/grinding accuracy to 0.005 mm, with roughness allowance (Ra) of 0.1~0.2 μm

### OUTSTANDING DESIGN

Large in size, with low running rpm, FUSHENG screw air-ends are more efficient and deliver more compressed air for the same driving power. Bearing design life can be assured by minimum vibrations and bending stress of the air-end.

### OUTSTANDING SERVICE

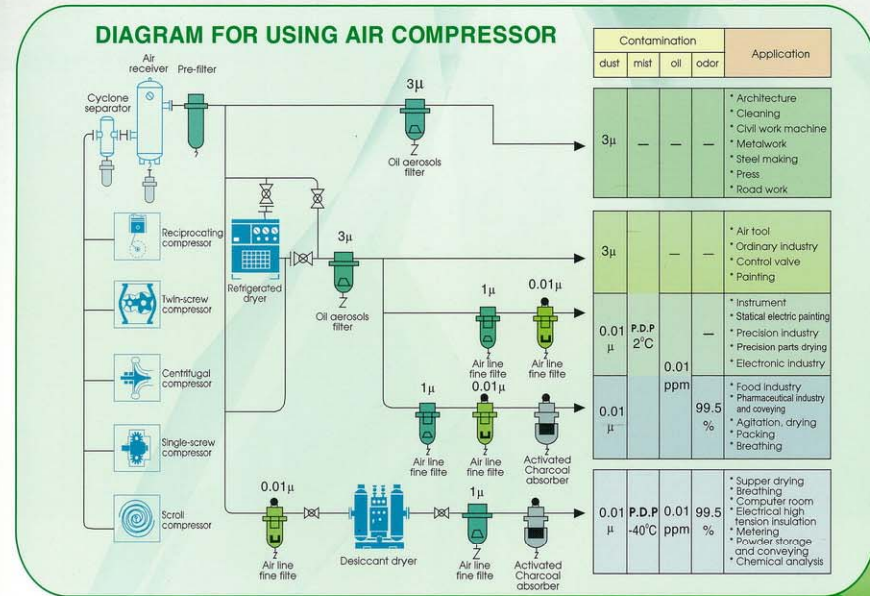
FUSHENG will be responsible for warranty and all genuine spare parts of FUSHENG supplied. Customers' pleasure and the constantly increasing reliability of products are the motto of FUSHENG. The more important thing is that we have always improved and been perfecting the production system to increase the value of products in the market. FUSHENG air compressors strives for your absolute confidence.



### AIR COOLED SCREW AIR COMPRESSOR SPECIFICATIONS

Specification		Model	SA 15A	SA 22A	SA 37A	SA 55A	SA 75A	SA 90A	SA110A
Air Deliver / Working Pressure	(m <sup>3</sup> /min)/ (kg/cm <sup>2</sup> G)		2.5 / 7	3.7 / 7	6.5 / 7	10.4 / 7	14.1 / 7	16.0 / 7	21.0 / 7
			2.3 / 8	3.5 / 8	6.2 / 8	9.6 / 8	12.8 / 8	15.2 / 8	19.8 / 8
			2.0 / 10	3.1 / 10	5.6 / 10	8.5 / 10	11.6 / 10	13.6 / 10	17.0 / 10
			1.7 / 12	2.7 / 12	4.9 / 12	7.6 / 12	10.3 / 12	12.3 / 12	15.3 / 12
Discharge Air Temp.	°C	Ambient temperature + 15°C			≤ 40°C (Water Cooler) ≤ Ambient temperature + 10°C (Air Cooler)				
Lubricant	L	22	26	70	100	110			
Power	KW	15	22	37	55	75	90	110	
Speed	rpm	1450			1480			2970	
Starting Method		Start Y - Δ							
Voltage	Volt	380							
Frequency	Hz	50							
Length	mm	850	1000	2200	3000				
Width	mm	1220	1410	1230	1640				
Height	mm	1300	1510	1668	1800				
Weight	kg	560	620	1020	1880	2020	2180	4300	

### DIAGRAM FOR USING AIR COMPRESSOR



## Planning new compressor correctly Help you save your money

### Operation pressure:

1. The higher operating pressure the more power is needed. The minimum operating pressure is the working pressure plus the piping loss. Selection of adequate pipe dimension and arrangement should be taken into account.
2. List all pressure you need to select compressor. If pressure differential is too big, compressors with different working pressures or boosters should be used. Do not regulate to lower pressure from high discharge of compressors. It will waste energy.

### Site selection:

1. Select wide and bright location for easy maintenance.
2. Choose low humidity, less dust, lean air and good ventilation area with room temperature lower than 40°C.

### Cooling water:

1. Low cooling water temperature is preferred. The application of cooling tower is recommended.
2. Pay special attention to the PH factor of cooling water. It should be kept around 7.0 to prevent the scale from clogging the copper tube, thus to save the maintenance expense.
3. Pay attention to the proper functioning of heat exchanger. Generally speaking, the air outlet temp of air compressor should be about 40 ~ 45°C

### Model selection:

1. Air delivery shown on our catalog can be justified as per ASME as per ASME code.
2. Add some allowance to the actual consumption you calculate.
3. Pay attention to the specific power consumption of the compressor to save the energy.

### The quality and requirement of compressed air:

The compressed air before condensation contains saturated water vapor which will hurt the precision instruments, pneumatic equipment, instrumentation, piping, etc. For fear of corrosion, clog, low air quality, damage to apparatus and increased maintenance cost



## WATER COOLED SCREW AIR COMPRESSOR SPECIFICATIONS

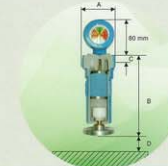
Model		SA - 475WII	SA - 4100WII	SA - 4125WII	SA - 5150WII	SA - 5175WII	SA - 5200WII	SA - 5250WII	SA - 5300WII	
Compressor stage	Working pressure	Kg/cm <sup>2</sup> G 7								
	Delivery	m <sup>3</sup> /min 10.5	14	16.5	21	26	29	35	42	
	Discharge Air Temp.	°C 40°C								
	Lubricant	Liter 70								
Main driver	Safety valve	Kg/cm <sup>2</sup> G 8								
	Power	HP 75	100	125	150	175	200	250	300	
	Ventilation	Forced ventilation								
	Starting method	Y - Δ Starter								
Dimension	Voltage	Volt 380								
	Frequency	Hz 50								
	Length	mm 2000			2916			3036		
	Width	mm 1420			2008			2106		
Air outlet pipe diameter	Height	mm 1700			1700			2106		
	Net Weight	Kg 2300	2500	2800	3500	4500		5800		
	Water outlet/inlet pipe diameter	Inch 1 1/2"	1 1/2"	1 1/2"	2"	2"		2"		

## FILTER TECHNICAL INFORMATION

Filter Model	Pipe Conn	Capacity At 7 ( kg / cm <sup>2</sup> ) Gauge Pressure			Max Oper Pressure ( kg / cm <sup>2</sup> )	Approx. Weight ( kg )	Dimensions ( mm )				Replacement Element Model
		( l/s )	( m <sup>3</sup> /min )	cfm			A	B	C	D	
T5	G1/2	10	0.60	21	16	1.3	87	175	21	60	AET5
T10	G1/2	20	1.20	42	16	1.4	87	209	21	90	AET10
T15	G3/4	28	1.70	60	16	1.7	87	279	21	90	AET15
T20	G1	47	2.80	99	16	4.2	130	315	43	135	AET20
T40	G1 1/2	90	5.40	191	16	4.8	130	415	43	235	AET40
T60	G1 1/2	133	8.00	283	16	5.6	130	515	43	335	AET30
T75	G1 1/2	200	12.00	424	16	8.4	130	715	43	525	AET35
T125	G2	283	17.00	600	16	11.4	164	823	48	520	AET40
T175	G2 1/2	433	26.00	918	16	13.0	164	1073	48	770	AET45
T250	G3	600	36.00	1272	16	20.0	250	1052	74	610	AET50
T300	G3	767	46.00	1625	16	27.5	250	1202	74	760	AET55

Filter Grade	Particle removal Down To	Oil Removal Down To ( μ )	Nominal Initial Pressure Drop
P	3 μ	---	0.03 bar g
U	1 μ	0.5 mg/m <sup>3</sup>	0.05 bar g
H	0.01 μ	0.01 mg/m <sup>3</sup>	0.09 bar g
C	---	0.003 mg/m <sup>3</sup>	0.10 bar g

(\*) Referred to 7 bar and 20 Degrees Celsius

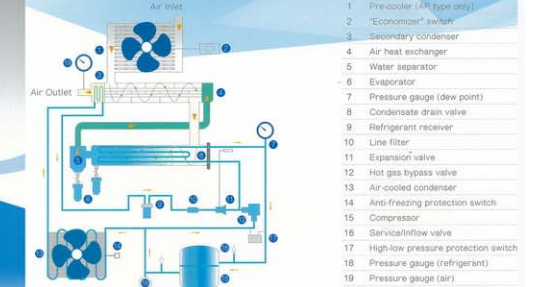


### GENERAL INFORMATION

Maximum recommended operating temperature of 60 degrees Celsius  
Maximum recommended operating temperature 1 degrees Celsius  
Maximum recommended operating pressure of 16 bar  
Maximum recommended pressure differential for element change is 0.6 bar. (Except Grade C)

Material for G-Type filters is aluminum  
Filters come complete with aut drain. Gauges are optional

### System Flow Chart



## Technical Data

Type	FR005A	FR010A	FR020A	FR030A	FR050A	FR075A	FR100A	FR150A	FR005AP	FR010AP	FR020AP	FR030AP	FR050AP	FR075AP	FR100AP	
50Hz/60Hz max. capacity(m <sup>3</sup> /min)	0.6	1.2	2.4	4.4	7.0	11	14	23.5	0.6	1.2	2.4	4.4	7.0	11	14	
Air inlet temp.	35°C(50°C Max.)(Capacity varies with different temperature)								55°C(80°C Max.)(Capacity varies with different temperature)							
Ambient temp.	32°C (43°C Max.)(Capacity varies with different temperature)															
Dew point	Dew point 2°C~10°C at 7Kg/cm <sup>2</sup> G															
Operating pressure	7Kg/cm <sup>2</sup> G(Capacity varies with different pressure),Max. pressure:10kg/cm <sup>2</sup> G															
Refrigerant	R134a				R407C				R134a				R407C			
Power consumption 50/60 (kw)	0.25 / 0.3	0.4 / 0.5	0.6 / 0.7	0.8 / 0.9	1.6 / 1.7	1.6 / 1.7	2.2 / 1.7	3.4 / 4.1	0.4 / 0.5	0.6 / 0.7	0.8 / 0.9	1.6 / 1.7	1.6 / 1.7	3.8 / 2.6	3.8 / 4.1	
Power supply	Single phase 50/60Hz				3-phase 220V 50/60Hz				3-phase 220V 50Hz/60Hz				Single phase 220V 50/60Hz			
Air piping size	G1/2"	G1/2"	G1"	G1"	G1 1/2"	G1 1/2"	G2"	G2 1/2"	G1/2"	G1"	G1"	G1 1/2"	G1 1/2"	G2"	G2 1/2"	
Dimensions (mm)	H	478	548	705	705	966	1166	1220	1260	548	709	705	966	1166	1214/1220	
	W	368	722	797	797	979	984	984	792	722	782	797	979	984	792/984	
	D	490	404	415	415	531	531	896	1022	404	452	415	531	1022/696	1022	
Net weight (Kg)	22	34	42	42	70	88	105/95	180	34	44	42	70	88	175/105	180	

\*G" indicates thread size in imperial unit.