

ARK

ARK VISION ROTARY SCREW AIR COMPRESSORS & CONTROL AIR DRYERS



ARK VISION
SPARE & ENGINEERING PTE LTD
No. 51 Tuas Ave 1 Singapore 639501

bizSAFE₄



BUSINESS UNFOLDS

Since 1998, Ark Vision has positioned itself as one of the leading stockist of marine spares and equipment. Housing a wide range and large stock of GENUINE and OEM, NEW and RECONDITIONED spares & equipment, Ark Vision has become an integral supplier to vessel owners, ship managers and trading houses.

To cater to the diverse needs in the marine & offshore as well as commercial industry, Ark Vision embarked on designing & manufacturing our own brand of rotary screw air compressors and control air dryers several years ago. To date, our Rotary Screw Air Compressors and Control Air Dryers have steadily gained sales momentum and brand recognition due to its high quality, first-rate performance and competitive price.

FLAGSHIP DESIGN, ADVANCED TECHNOLOGY, RELIABLE PERFORMANCE ALL AT A VERY COMPETITIVE PRICE

First Impression Lasts.

Our Rotary Screw Air Compressors and Control Air Dryers are designed to operate efficiently in high ambient temperatures, withstand vibration and the rugged environment, requires very low maintenance, are easy to operate, quiet and long lasting.

Without compromising quality, our Rotary Screw Air Compressors and Control Air Dryers are offered at very competitive price. This has been one of the economical edges of our compressors & dryers, making them easily recognized in the industry, particularly in the marine & offshore sector. This means giving our customer the economical advantage without compromising any of the following areas: design, materials and production.

With more than 8 years of manufacturing, Ark Vision has continuously invested in technological advancement, which led to Service Air Compressors and Control Air Dryers built on endurance and seamless user-friendly features.

THE COST-EFFECTIVE ADVANTAGE (ROTARY SCREW COMPRESSORS VERSUS PISTON TYPE)

While piston compressors are still widely used, rotary screw air compressors are gradually and successfully replacing them.

1. Duty Cycle

Duty Cycle is the duration a compressor may operate without the risk of overheating or causing excessive wear. Piston type compressors have only up to 60% duty cycle, while rotary compressors have allowable 100% duty cycle.

Moreover screw compressors operate continuously because they are fluid cooled. The fluid perform four important functions:

- Lubricates the bearings in the pump
- Removes contaminants from the air
- Forms non-wearing seal between rotors and casing
- Removes the heat generated by compression

2. Heat Cooling Mechanism

Our Rotary Screw Air Compressors come with built-in radiator that cools down the air that exits the compressor.

This is contrary to the air exiting from piston type compressor that is very hot and hard to dry. Even with a radiator or temperature dryer, it is difficult to reach the same dew point as a rotary screw compressor.

3. Oil Carry Over

As pistons, cylinders, rings and valves wear, the piston compressors deliver less air. A side effect is that more lubricating oil gets past the rings into the compressed air piping and down to the points of use.

With rotary screw compressors, there is little to no change in performance over time, because the rotors do not touch each other, so they do not wear down. The compressor fluid acts as a non-wearing sealant. It is captured, filtered, cooled and re-circulated which greatly extends the life span of the compressor.

4. Energy Efficiency and Maintenance Cost

Rotary compressors typically deliver more air per unit of energy (cfm /hp) than piston compressors. Piston compressors generally deliver 3 to 4 cfm per hp, while rotary compressors deliver 4 to 5 cfm per hp.

Rotary screw compressors components may cost more than piston type compressors. However, piston compressors have more moving parts and are subjected to wear a lot faster than screw type, consequently requiring major overhaul service and frequent maintenance schedules. Hence piston compressors have higher overall maintenance cost.

5. Noise Level and Vibration

Typically, piston type compressors create high-noise and vibration. Rotary compressors, on the other hand, are known for being silent and less susceptible to vibration. Hence screw compressors offer more flexibility in terms of where they can be sited onboard the vessels or plants.

At a glance, here is a comparative characteristic of Rotary Screw Compressors and Piston Type Compressors.

	Rotary Screw Compressors	Piston Type Compressors
Duty Cycle	100%	60% (limited)
Oil Carry Over	1 to 5 ppm	10 ppm or above
Noise Level	Typically 72 dB(A)	Typically >80 dB(A)
Air Flow	4 - 5 cfm / hp	3 - 4 cfm / hp
Internal Operating Temperature	76°C - 93°C	148°C - 205°C

AIREND TECHNOLOGY FROM GERMANY / ITALY



Regarded as the “heart” of the compressor, Ark Vision’s airend are designed to deliver maximum performance and are highly durable. Ark Vision Rotary Screw Air Compressors are fitted with low power consumption twin-screw airend, which are directly imported from renowned manufacturer from Europe. Each airend is designed for durability and consistent performance, undergoing dynamic and static balance tests. This makes the compressors run with minimal noise & vibration and helps the formation of oil film, which reduces internal leakage.

PROGRAMMABLE LOGIC CONTROLLER (PLC) PANEL



Ark Vision Rotary Screw Air Compressors are fitted with built-in PLC panel that allows user to set the unit at their desired parameters.

From system alarms, pre-scheduled maintenance intervals and troubleshooting instructions, our PLC is especially designed to control all functions at a single-point access.

INTAKE VALVE (HOERBIGER FROM AUSTRIA)



Automatically adjust based on air consumption, requires low maintenance, good stability, large inlet air.

BUILT-IN RADIATOR



Regarded as one of its best features, our compressors are integrated with a heavy-duty air cooler that is mounted onto the unit and operates independently from the cooling fan of the electric motor.

Having a separate air cooler improves efficiency by facilitating better heat exchange, thereby preventing overheating.

HIGH PERFORMANCE ELECTRIC MOTOR



Another one of the key components, our electric motors are ensured to be high-performing and heavy-enduring.

Fitted with SKF bearings, IP55 class protection and F Class insulation, our motor's output efficiency records at 96% while maintaining low-noise operation.

FILTERS AND OIL AIR SEPARATORS (MANN FILTER FROM GERMANY)



Our Compressors are equipped with German MANN filters that effectively remove contaminants from the compressed air.

With a recorded 20% higher efficiency and accurate filtration of up to 9 microns, MANN filters adds more protection to the airend and to the compressor's life span consequently.

ELECTRIC PANEL (ABB, SCHNEIDER, SIEMENS)



Our electric panel uses world's most recognized electrical brands such as ABB, Siemens and Schneider.

Electrical performance is paramount to the compressor's efficiency, which is why our electrical engineers have ensured professional design with intrinsic ability to detect and rectify faults automatically.

UNIQUE AUTOMATIC TIGHTENER

Our compressors are fitted with high-efficient belt transmission device which takes a leap from manual adjustment to automatic tightening, to increase transmission efficiency.

This paves way for convenient maintenance, alternates air pressure easily, less shock to the compressor and transmission efficiency.



ARK VISION H 46, SYNTHETIC COMPRESSOR LUBRICANT



We only use synthetic compressor lubricating oil, Ark Vision H 46, which is proven to provide a superior level of fluid film protection against metal-to-metal friction, thereby reducing scuffing, pitting and rolling contact fatigue.

Having a wider operating temperature range than mineral based lubricating oil, synthetic lubricants offer superior oxidative and thermal stability.

BEARINGS (SKF BEARINGS FROM SWEDEN)

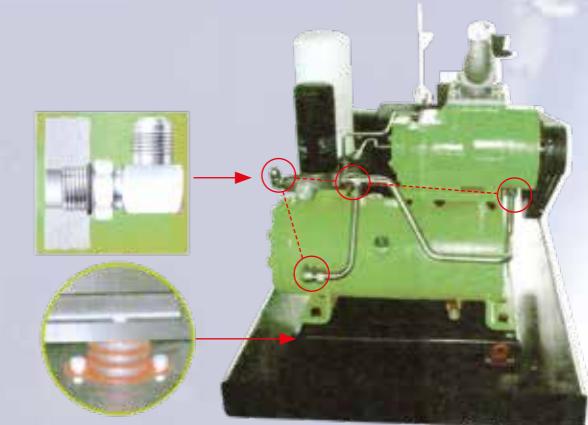


We use bearings that are tailor-fit for specific applications. SKF bearings are designed for high performance by using housings and seals that are well known for quality and durability.

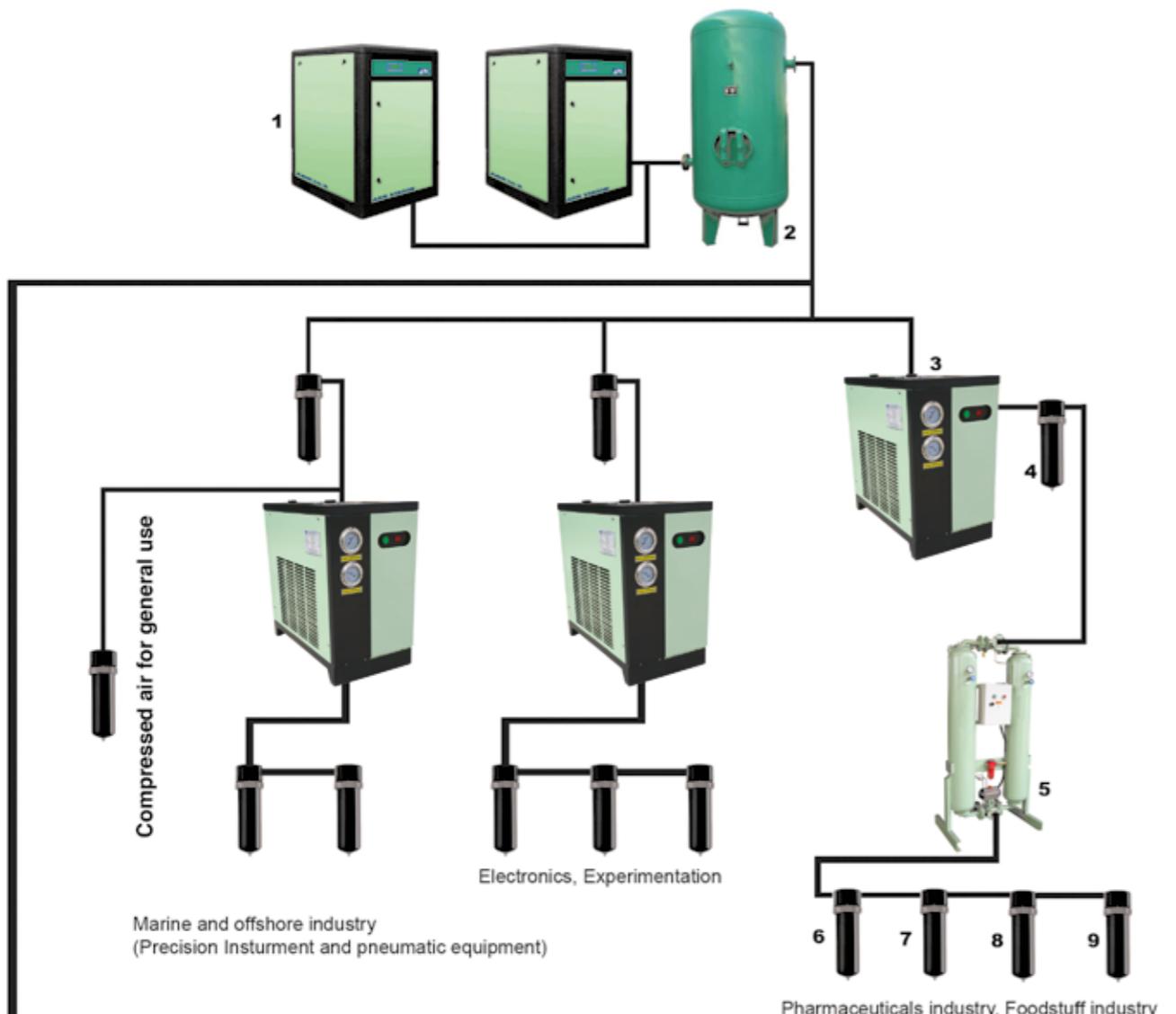
Moreover, SKF bearings are precision-machined to fully maximize its service life.

Pipeline Parts – both our oil and air pipelines are made of stainless steel which withstands inside and outside double protection, heat-resistance, pressure-resistance and long duration. All the control pipelines are made of F46 materials, which makes the system run on standby for longer time.

Powerful Shock Absorbers – By strategically adding hidden shock absorbers in the drive parts, noise produced in the running process of compressors are greatly reduced by 3-5dB(A), thereby prolonging the useful life of the compressor.



Energy Conservation And Environment Friendly Configuration



1. Screw Air Compressor

2. Air Receiver

3. Refrigerator Dryer

4. Pre-Air Filter

5. Heatless Regeneration Dryer

6. After-Air Filter

7. Final-Air Filter

8. Activated Carbon-Air Filter

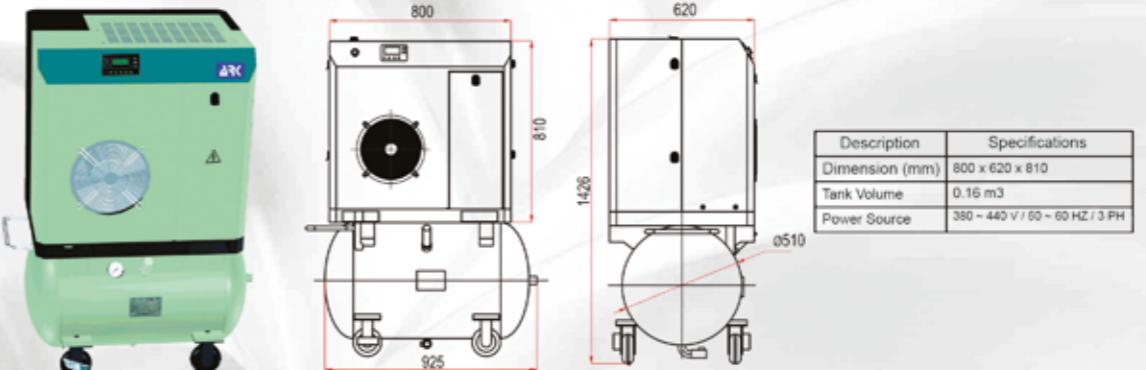
9. Sterilizing Air Filter.

- Control two or more compressors easily with a connecting line.
- Automatically determine either to shut down the compressor or to start the stand-by compressor.
- Timing switch makes the main compressor and the vice compressor work by turns.
- Breakdown judgement and switch to the stand-by compressor automatically.

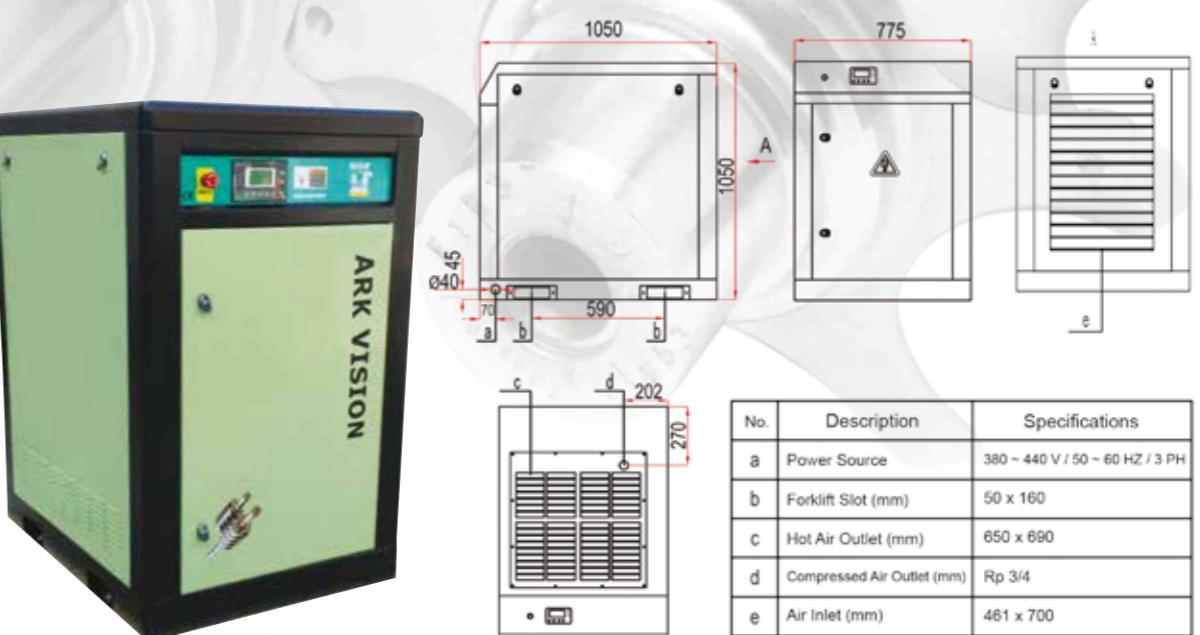
- Four control modes: automatic control, manual control, linkage control and remote control
- The display of running state: power supply, exhaust air pressure temperature and normal time.
- Automatic alarm and protection: overheating, lack of oil, overpressure, separator block, oil filter block, air filter element block, phase-sequence disorder, overload and sensors breakdown.
- Specification preset and modification: control mode, start/stop automatically, load/unload pressure, upper limit/lower limit of temperature, time delay of load, operation order of alternate operating compressor, maintenance time and calendar/time.
- History record inquiry: load/unload running time, oil filter left time oil-air separator left time, air filter left time, summary running time and history breakdown record.

SPECIFICATION BELT DRIVE SERIES ARKB4 ~ ARK18

MODEL	POWER kW	POWER hp	PRESSURE bar	AIR FLOW m ³ /min	AIR FLOW CFM	NOISE LEVEL dB(A)	OUTLET CONNECTION	DIMENSION L x B x H mm	WEIGHT Kg
ARKB4-A8 ARKB4-A10 ARKB4-A13	4.0	5.5	7(8) 10 13	0.5 0.4 0.25	18 14 9	60	Rp1/2	925x620x1426	180
ARKB5-A8 ARKB5-A10 ARKB5-A13	5.5	7.5	7(8) 10 13	0.8 0.63 0.5	28 22 18	60	Rp1/2	925x620x1426	200
ARKB7-A8 ARKB7-A10 ARKB7-A13	7.5	10.0	7(8) 10 13	1.15 1.0 0.79	41 35 28	62	Rp1/2	925x620x1426	220
ARKB11-A8 ARKB11-A10 ARKB11-A13	11	15.0	7(8) 10 13	1.80 1.50 1.20	64 53 42	66	Rp1/2	925x620x1426	260

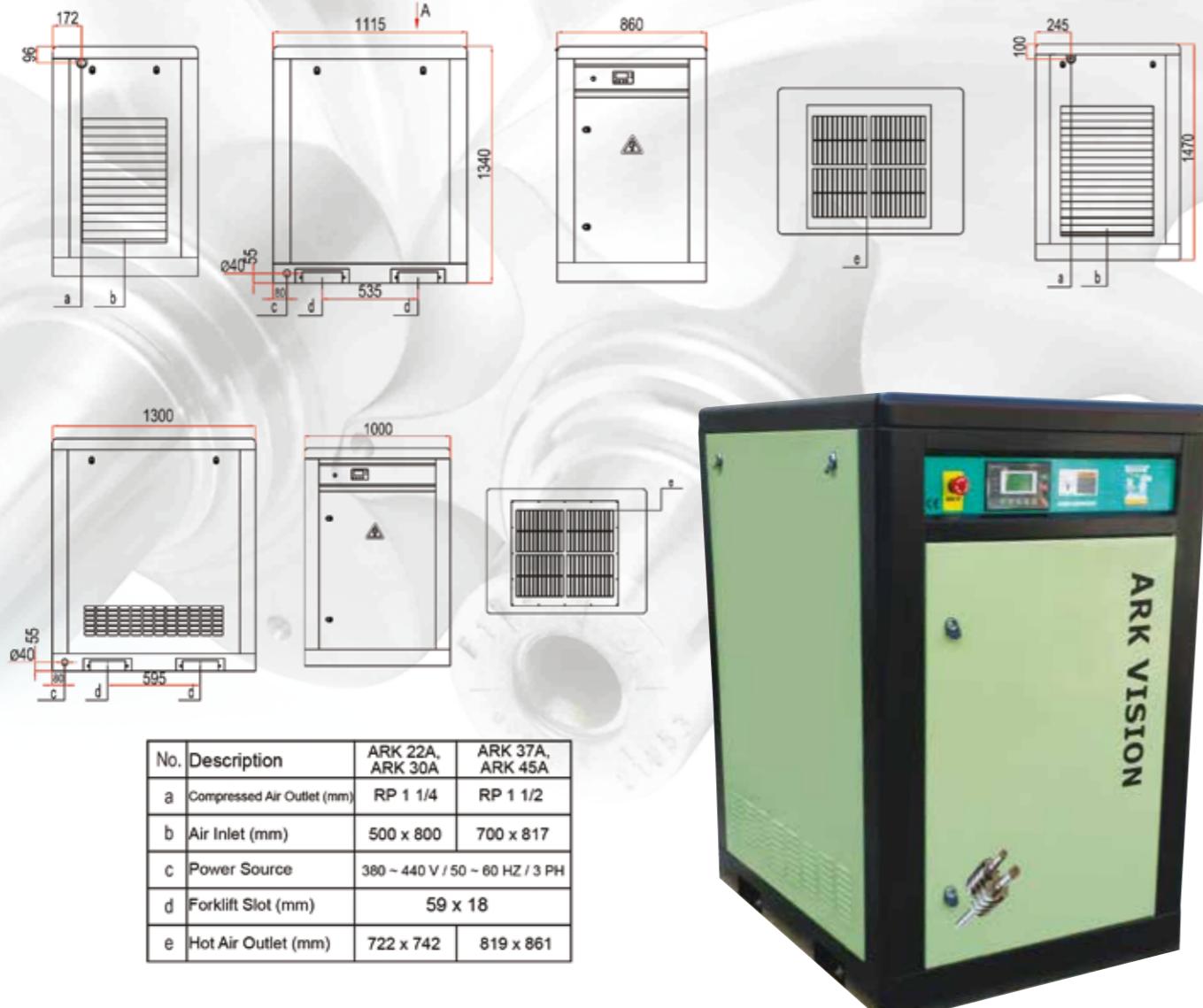


MODEL	POWER kW	POWER hp	PRESSURE bar	AIR FLOW m ³ /min	AIR FLOW CFM	NOISE LEVEL dB(A)	OUTLET CONNECTION	DIMENSION L x B x H mm	WEIGHT Kg
ARK15-A8 ARK15-A10 ARK15-A13	15	20	7(8) 10 13	2.30 2.05 1.65	81 72 58	66	Rp 3/4	775x1050x1050	420
ARK18-A8 ARK18-A10 ARK18-A13	18.5	25	7(8) 10 13	3.0 2.6 2.2	106 92 78	66	Rp 3/4	775x1050x1050	480



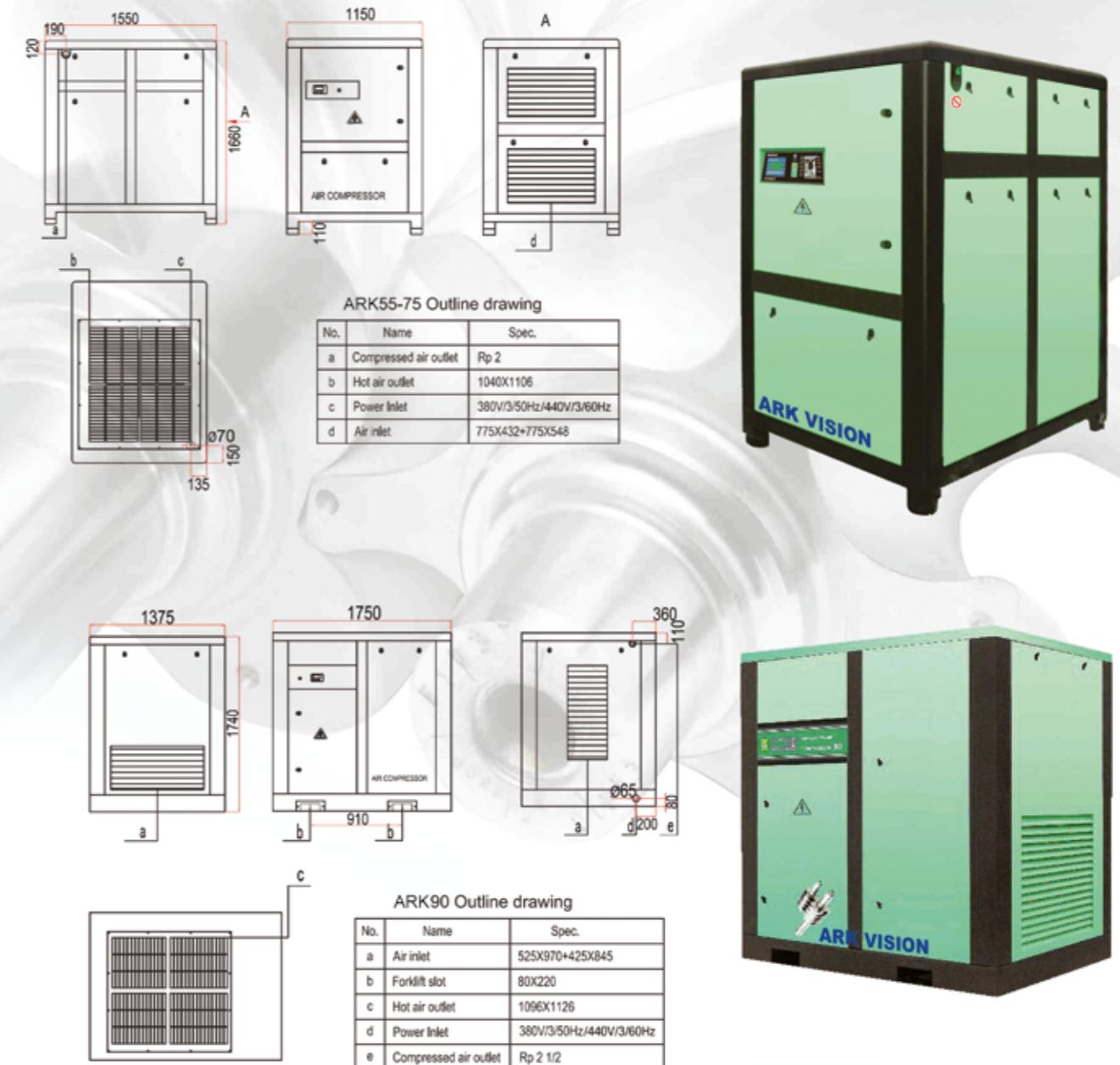
**SPECIFICATION
DIRECT DRIVE SERIES
ARK22 ~ ARK45**

MODEL	POWER kW	POWER hp	PRESSURE bar	AIR FLOW m ³ /min	AIR FLOW CFM	NOISE LEVEL dB(A)	OUTLET CONNECTION	DIMENSION L x B x H mm	WEIGHT Kg
ARK22-A7			7	3.8	134				
ARK22-A8	22	30	8	3.6	127				
ARK22-A10			10	3.2	113				
ARK22-A13			13	2.8	99				
ARK30-A7			7	5.2	184				
ARK30-A8	30	40	8	5.0	177				
ARK30-A10			10	4.5	159				
ARK30-A13			13	3.7	131				
ARK37-A7			7	6.8	240				
ARK37-A8	37	50	8	6.6	233				
ARK37-A10			10	5.8	205				
ARK37-A13			13	4.8	170				
ARK45-A7			7	8.0	283				
ARK45-A8	45	60.5	8	7.6	268				
ARK45-A10			10	7.0	247				
ARK45-A13			13	5.8	205				



**SPECIFICATION
DIRECT DRIVE SERIES
ARK55 ~ ARK90**

MODEL	POWER kW	POWER hp	PRESSURE bar	AIR FLOW m ³ /min	AIR FLOW CFM	NOISE LEVEL dB(A)	OUTLET CONNECTION	DIMENSION L x B x H mm	WEIGHT Kg
ARK55-A7			7	10.8	382				
ARK55-A8	55	74	8	10.0	353				
ARK55-A8/D			8	10.0	353				
ARK55-A10			10	9.0	318				
ARK55-A13			13	7.8	276				
ARK75-A7			7	13.8	487				
ARK75-A8	75	100	8	13.0	459				
ARK75-A8/D			8	13.0	459				
ARK75-A10			10	11.8	417				
ARK75-A10/D			10	11.8	417				
ARK75-A13			13	9.8	346				
ARK90(W)-A7			7	16.0	565				
ARK90(W)-A8	90	121	8	15.0	530				
ARK90(W)-A8/D			8	15.0	530				
ARK90(W)-A10			10	13.0	459				
ARK90(W)-A10/D			10	13.0	459				
ARK90(W)-A13			13	11.0	389				



SPECIFICATION
DIRECT DRIVE SERIES
ARK110 ~ ARK250

MODEL	POWER kW	POWER hp	PRESSURE bar	AIR FLOW m ³ /min	AIR FLOW CFM	NOISE LEVEL dB(A)	OUTLET CONNECTION	DIMENSION L x B x H mm	WEIGHT Kg
ARK110(W)-7/D ARK110(W)-8/D ARK110(W)-10/D ARK110(W)-13/D	110	148	7 8 10 13	20.5 20.0 17.0 13.6	724 706 600 480	78	DN65	2166x1700x1918	2300
ARK132(W)-7/D ARK132(W)-8/D ARK132(W)-10/D ARK132(W)-13/D	132	177	7 8 10 13	23.6 23.2 20.0 16.0	834 819 714 565	80	DN65	2166x1700x1918	2500
ARK160(W)-7/D ARK160(W)-8/D ARK160(W)-10/D ARK160(W)-13/D	160	215	7 8 10 13	27.2 26.6 24.5 20.8	961 940 865 735	80	DN65	2466x1900x1918	2750
ARK180(W)-7/D ARK180(W)-8/D ARK180(W)-10/D ARK180(W)-13/D	180	241	7 8 10 13	30.0 29.2 26.8 23.0	1060 1031 947 812	82	DN65	2466x1900x1918	3000
ARK200(W)-8/D ARK200(W)-10/D ARK200(W)-13/D	200	268	8 10 13	33.6 29.5 25.0	1187 1042 833	82	DN80	2666x2000x1918	4500
ARK220(W)-8/D ARK220(W)-10/D ARK220(W)-13/D	220	295	8 10 13	37.5 33.5 28.0	1325 1183 989	85	DN80	2666x2000x1918	4800
ARK250(W)-8/DE ARK250(W)-10/DE ARK250(W)-13/DE	250	335	8 10 13	40.5 36.5 31.0	1431 1289 1095	85	DN80	2666x2000x1918	5200

SPECIAL SCREW AIR COMPRESSOR

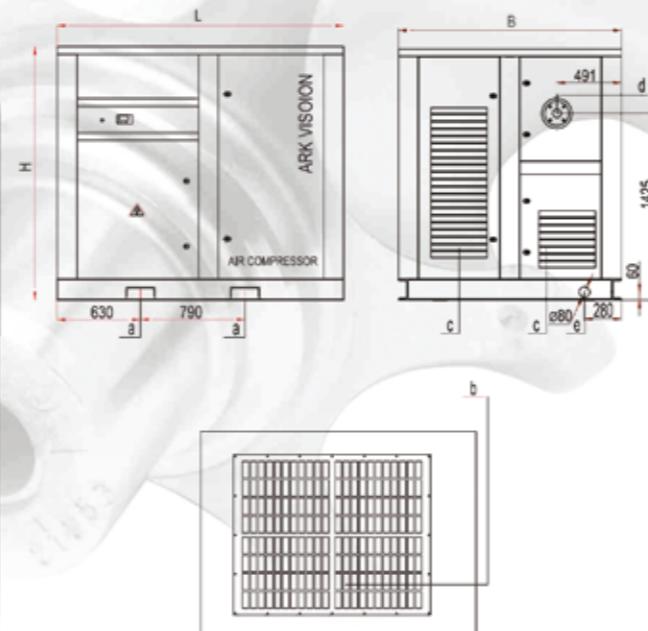
This screw compressor is special designed equipment for hostile working conditions, such as high temperature, dust pollution, high magnetic field and big voltage fluctuation place.

It has a unique structure with multi-function, adaptable to the hostile environment and unfavourable working conditions, it is customized screw air compressor.



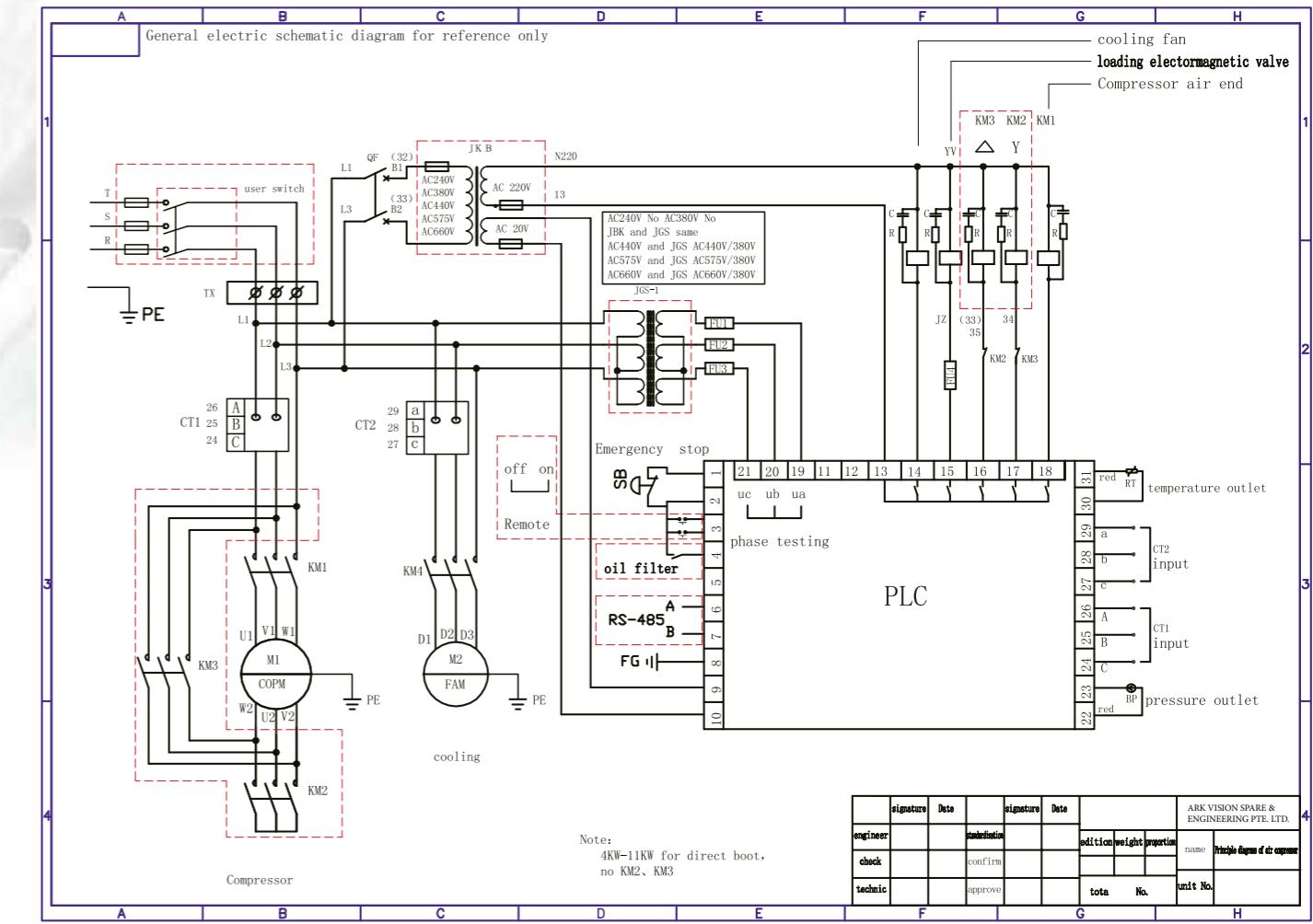
SPECIFICATIONS

MODEL	POWER kW	POWER hp	PRESSURE bar	AIR/FLOW m ³ /min	AIR/FLOW CFM	OUTLET CONNECTION	DIMENSION L x B x H mm	WEIGHT Kg
ARKSSC37A-8	37	50	8.0	7.0	247	Rp 1 1/2	3100 x 860 x 1630	1520
ARKSSC55A-8	55	74	8.0	9.0	318	Rp 2	3100 x 860 x 1630	1680
ARKSSC75A-8	75	100	8.0	13.2	466	Rp 2	3380 x 890 x 1830	1920
ARKSSC90A-8	90	121	8.0	16.0	565	Rp 2 1/2	3860 x 960 x 1830	2300



No.	Name	Spec.
a	Forklift slot	83X206
b	Hot air outlet	1370X1546
c	Air inlet	3X430X1147+430X487
d	Compressed air outlet	PN16 DN65
e	Power Inlet	380V/3/50Hz/440V/3/60Hz

SCREW COMPRESSOR ELECTRIC CIRCUIT DIAGRAM



CONTROL AIR DRYERS

SPECIFICATIONS OF CAD SERIES REFRIGERATION

MODEL	CAPACITY (m³/min)	ELECTRICITY (V/P/Hz)	POWER (W)	INLET/OUTLET	L x B x H (mm)	WEIGHT (Kg)
CAD -14	1.4	220/1/60	360	G 1/2	740x470x645	70
CAD -18	1.8	220/1/60	360	G 1	740x470x645	110
CAD -26	2.6	220/1/60	360	G 1	740x470x645	110
CAD -38	3.8	220/1/60	750	G 1	750x510x685	130
CAD -55	5.5	220/1/60	750	G 1 1/2	870x510x790	150
CAD -69	6.9	220/1/60	1000	G 1 1/2	980x520x775	160
CAD -85	8.5	220/1/60	1380	G 2	1100x645x975	200
CAD -108	10.8	440/3/60	2500	DN50	1350x690x1120	250
CAD -145	14.5	440/3/60	2780	DN50	1500x775x1210	320
CAD -165	16.5	440/3/60	2780	DN65	1500x775x1210	370
CAD -195	19.5	440/3/60	2780	DN65	1500x775x1210	420
CAD -225	22.5	440/3/60	2780	DN65	1500x775x1210	450
CAD -285	28.5	440/3/60	4500	DN80	1510x850x1360	550
CAD -360	36.0	440/3/60	4800	DN80	1510x850x1360	650
CAD -430	43.0	440/3/60	5700	DN100	1790x890x1385	750
CAD -520	52.0	440/3/60	7500	DN100	2060x860x1659	980
CAD -630	63.0	440/3/60	7500	DN125	2060x860x1659	1190
CAD -800	80.0	440/3/60	11000	DN125	2480x1180x1735	1250



OUR CONTROL AIR DRYERS ARE OF REFRIGERATION TYPE.

Compressed air contains some water vapour at relative humidity of 100%. As the air is cooled down, water vapour in the air is condensed into water. Presence of water in the compressed air system may cause following:

- Higher maintenance costs specifically cost on repair / renew of electromagnetic valve, cylinder, etc. This also affects the unit's overall efficiency and eventual deterioration.
- Lower processing quality, especially for applications such as lacquer spraying, sand blasting, air operated system, food stuff, pharmaceutical industry & pneumatic control onboard vessel and offshore.

Hence installing refrigeration type Ark Vision Control Air Dryer Units will remove excess water from the compressed air system.

COMPRESSED AIR FILTER

ELEMENTS FILTRATION RATING

FUNCTION	GRADE P	GRADE A	GRADE F	GRADE AC	GRADE AD
PARTICLE REMOVAL	1µm	1µm	0.01µm	Odourless	Oilless, odourless, bacteria-free, low dew point
OIL CONTENT	1ppm	0.1ppm	0.01ppm	0.003ppm	Oilless, odourless, bacteria-free, low dew point

Grade AD: Blocking bacteria and bacteriophages efficiently in compressed air with steam at 200°C passing through regularly to sterilize. Times of recycle:100

When pressure is not 7 bar, their capacities should be divided by correct parameter listed in the following table
Then, select models needed

Pressure bar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Correctness parameter	0.25	0.37	0.5	0.62	0.75	0.87	1	1.12	1.25	1.37	1.5	1.62	1.75	1.87	2	2.12

SPECIFICATIONS OF SF SERIES HIGH EFFICIENCY FILTER

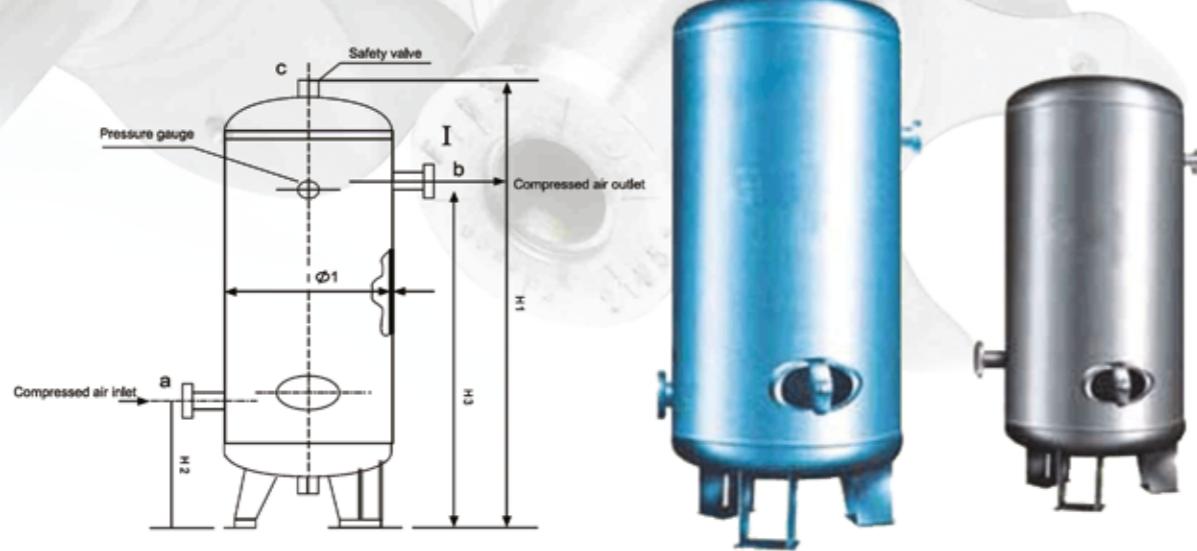
MODEL	CAPACITY (m³/min)	CONNECTIONS	ELEMENTS MODEL & QUANTITY	DIMENSIONS (mm) L H
AF18--	1.80	G 1/2	E-16x1	104 243
AF26--	2.60	G 1	E-20x1	104 313
AF38--	3.80	G 1 1/2	E-24x1	138 424
AF55--	5.50	G 1 1/2	E-28x1	138 424
AF69--	6.90	G 1 1/2	E-32x1	138 624
AF100--	10.00	G 1 1/2	E-36x1	138 624
AF140--	14.00	G 2	E-40x1	148 685
AF165--	16.50	G 2	E-44x1	148 825
AF180--	18.00	DN65	E-44x1	300 940
AF220--	22.00	G 2 1/2	E-48x1	150 1000
AF280---	28.00	DN80	E-40x2	336 1118
AF360--	36.00	DN100	E-44x2	500 1150
AF540--	54.00	DN100	E-44x3	500 1150
AF720--	72.00	DN100	E-44x4	600 1250
AF900--	90.00	DN125	E-44x5	600 1250



COMPRESSED AIR RECEIVER

Main specifications and Basic Fixed Dimensions

Model	m ³	Bar	Ø1	H ₁	H ₂	H ₃	Materials	c	a, b	Kg
AC-0.3/8		8		1620	655	1255	Q235-B			121
AC-0.3/10	0.3	10	600	1620	655	1255	Q235-B	RP3/4	DN65	139
AC-0.3/13		13		1622	656	1258	Q235-B			167
AC-0.6/8		8		1940	680	1550	Q235-B			185
AC-0.6/10	0.6	10	700	1942	681	1551	Q235-B	RP3/4	DN65	217
AC-0.6/13		13		1942	681	1551	Q235-B			265
AC-1.1/8		8		2367	731	1961	Q235-B			283
AC-1.1/10	1	10	800	2367	731	1961	Q235-B	RP1	DN80	324
AC-1.1/13		13		2367	731	1961	16MnR			331
AC-1.5/8		8		2817	736	2380	Q235-B			408
AC-1.5/10	1.5	10	900	2817	736	2380	Q235-B	RP1	DN80	473
AC-1.5/13		13		2817	736	2380	16MnR			423
AC-2/8		8		2867	761	2411	Q235-B			513
AC-2/10	2	10	1000	2867	761	2411	Q235-B	RP1	DN80	661
AC-2/13		13		2867	761	2411	16MnR			538
AC-2.5/8		8		2917	786	2436	Q235-B			642
AC-2.5/10	2.5	10	1100	2917	786	2436	Q235-B	RP1	DN80	724
AC-2.5/13		13		2921	788	2438	16MnR			773
AC-3/8		8		3032	871	2521	Q235-B			735
AC-3/10	3	10	1200	3032	871	2521	Q235-B	RP1 1/4	DN80	865
AC-3/13		13		3036	873	2523	16MnR			855
AC-4/8		8		3142	931	2581	Q235-B			947
AC-4/10	4	10	1400	3144	932	2582	Q235-B	RP1 1/4	DN100	1170
AC-6/8		8		4362	931	3651	Q235-B	RP1 1/2	DN125	1320
AC-6/10	6	10	1400	4364	932	3652	Q235-B			1657
AC-10/8		8		3831	1158	3038	16MnR	RP2	DN150	1847
AC-10/10	10	10	2000	3865	1175	3055	16MnR			2262



COST SAVING ASSURING QUALITY

With the current progressive technology, manufacturing cost has been lowered while performance increased thus making Ark Vision Screw Air Compressor to be more cost – effective and economical brand in the market.

ENERGY SAVING AND ENVIRONMENTAL PROTECTION

Since the emergence of the rotor in 5:6 lobe combinations in the market, Ark Vision Screw Air Compressor has since faced several optimization and improvements and accumulated enormous amount of achievements in the field of energy saving and environmental protection.

OUR PROMISE

Ark Vision values your importance and will always be there in times of need. Ark Vision is always proud of its high technical capabilities and the drive to exceed customers' expectations. From the entire process of production to after-sales service, Ark Vision thrives to maintain the strong faith of its customers while seeking perfection.



OVERSEAS OFFICES:

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