

# A SERIES

## RECIPROCATING AIR COMPRESSORS



**RECIPROCATING  
AIR COMPRESSORS  
0.5-20 HP**



**SOME COMPANIES ARE FOUNDED ON HARD WORK.  
OTHERS ARE FOUNDED ON IDEALS.**

**FS-CURTIS WAS FOUNDED ON BOTH.**

# A HISTORY OF

**1854**

Curtis & Co. –  
Empire Saw founded  
in St. Louis, MO, USA

**1857**

Earned Agricultural  
and Mechanical Fair  
award for excellence  
and quality

**1876**

Named Curtis  
and Co.  
Manufacturing

**1897**

Built first  
reciprocating  
air compressor  
that later evolved  
into the Master  
Line Series

**1914**

Supported U.S.  
Government efforts  
by producing more  
than 2 million Howitzer  
shell forgings

**1940**

Designed and  
developed  
mobile oxygen  
compressors to be  
used in Aerospace  
applications

**1955**

Merged with U.S.  
Air Compressor  
Company, Central  
Petroleum Company,  
Lewis Machine  
Company



## REAL-WORLD PEOPLE

When you're successful, we're successful. That's why FS-Curtis listens. Trust and dependability are the foundations of our past and the fabric of our future, so you can count on being treated with the personal touch you deserve.

“Trust and dependability are the foundations of our past and the fabric of our future.”

~ Brent Becker – President, FS-Curtis

More than 150 years ago, the FS-Curtis way of doing business was established through two key commitments: a dedication to building quality products and a dedication to responsive customer service.

Over the decades, the company and its products have evolved through innovation and new technologies. But those commitments to quality and service remain unchanged. Today, just as in 1854, FS-Curtis customers can depend on our products for reliable, long-term service. Equally as important, they can depend on getting the same from our people.

# EXCELLENCE

1976

Merged with Toledo Tools as Curtis-Toledo Inc.

1979

Introduction of Challenge Air Series reciprocating air compressors

1995

Began manufacturing and assembling Rotary Screw compressors

2005

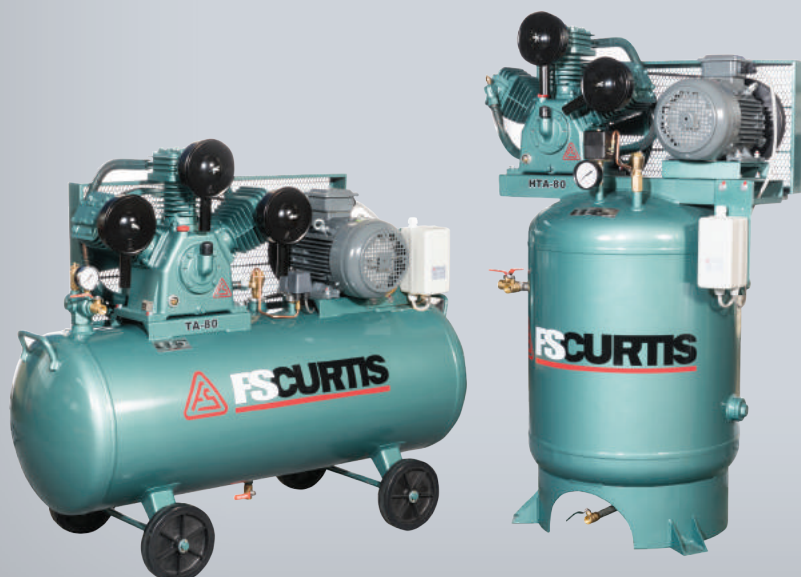
Expanded global market reach by joining forces with Fusheng Industrial

2006

U.S. Headquarters certified as ISO9001:2000 and ISO14001:2004

2010

Introduced next generation GSV Variable Speed Rotary Screw compressors



## REAL-WORLD PRODUCTS

Take more than a century of experience building quality compressors, add in a staff that's listening to the needs of the market, and the result is a product lineup that's built for tough working conditions. No wonder so many customers around the world depend on FS-Curtis compressors day in and day out.



## THE INDUSTRY WORKHORSE

For automotive, light industrial and other challenging applications, A Series compressors are built to last. Components are selected based on durability and performance, ensuring that your A Series compressor delivers reliable performance in demanding applications. Precision-machined components and a dedication to materials of construction that are meant for real world working conditions further assure long-term durability.



# BUILT TO LAST



## A SERIES FEATURES AT A GLANCE

### THE MOST DURABLE PUMP CONSTRUCTION AVAILABLE

*Meticulous material selection ensures long-term reliability.*

- 100% cast-iron cylinders and cylinder heads
- Long-lasting, corrosion-resistant crankshaft
- Reduces thermal stress for increased reliability
- Deep-finned cast-iron cylinders and cylinder head for cool operation
- Slow-turning pump increases pump life

### INDUSTRIAL DESIGN

*The most robust reciprocating air compressor in its class.*

- Provides higher pressures, better efficiency and longer life
- Ready to handle rugged, heavy-duty applications

### QUALITY COMPONENTS

*For extended product life and continuous performance.*

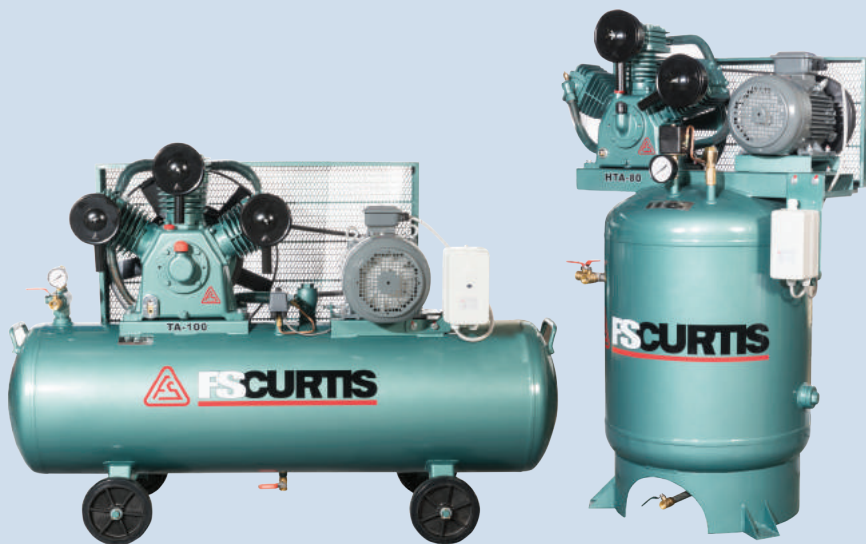
- Industrial-grade main roller bearings are precision fit for support of all rotating parts
- High-flow, heavy-duty stainless-steel valve system delivers more cfm per horsepower
- Robust intercooler increases compressor efficiency
- Metal intake filter/silencer is superior to plastic
- Heavy-duty stamped-steel belt guard
- Suction valve head unloaders for continuous running air compressors

**AMERICAN  
CRAFTSMANSHIP  
ST. LOUIS, MO USA**

**Compare A Series compressors  
with any other brand, and you'll  
see the difference.**

# THE PERFECT CHOICE

A Series compressors aren't just built to handle harsh environments — they're also available in a wide range of configurations to meet your exact application. You'll get the rugged construction you desire in the configuration you need.

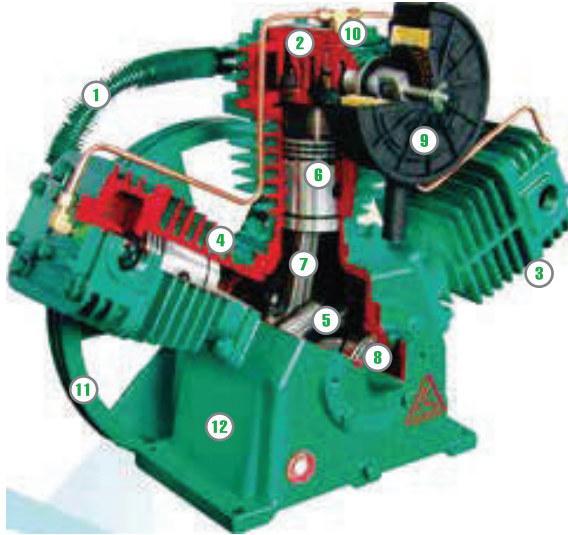


## SIMPLEX

Simplex compressors are well suited for common applications where only one compressor is needed.

- Magnetic motor starter
- Manual tank drain
- Oil sight glass
- Horizontal or vertical tank configurations available
- Factory oil filled

## The interior construction diagram of air-cooled reciprocated air compressor



### 1.After Cooler

The copper tube is fitted with high-efficiency cooling fins that effectively reduce gas working temperature and increase air compression efficiency.

### 2.Valve Assembly

All units use large disc-type valves made from Swedish steel for high efficiency and long wear

### 3.Cool Cylinder Heads

Deep directional fins provide quick cooling; compact streamlined air passages in the cylinder head permit fast, efficient flow of cooler intake air and rapid removal of discharge air.

### 4.Long-Life Cylinders

Precision-machined cylinder walls are honed glass-smooth to reduce friction and wear to a minimum. Extra-deep fins provide increased cooling and greater strength.

### 5.Balanced Crankshaft

Made from a high-tensile forged alloy steel and precisely ground and dynamically balanced to insure long life and smooth operation. Journals are ground precisely to extend bearing life.

### 6.Ring

Long life industrial design compression and oil control rings are used to assure maximum performance.

### 7.Connecting Rods

All units contain precision bore , industrial quality designed connecting rods ... a splash lubrication is used.

### 8.Main Bearings

To insure long life and easy maintenance, high quality ball bearings or tapered roller bearings are used in the FUSHENG compressors.

### 9.Suction Strainer

Permanent type strainer effectively filters air and muffles noise of air intake. Easily removed for periodic cleaning

### 10.Continuous Running Unloader

For continuous-running air compressors, unloader lets unit idle load-free until air supply drops to cut-in pressure; automatically lets unit idle again after high pressure limit is reached.(Tubing and fittings not included on bare pumps

### 11.Balanced Fan-Type Flywheel

Airfoil-type spokes provide a continuous powerful blast of cooling air for all portions of the compressors; balancing assures smooth and low vibration operation.

### 12.Crankcase

The extra large crankcase with big oil reservoir assures cooler running and better lubrication.



# TECHNICAL DATA



## A-SERIES AIR COMPRESSORS

Model	Motor		Cylinder			Comp R.P.M	Piston Disp.	Working Pressure ( Kg/cm²G)	Air Receiver			Net Weight ( kg )
	Hp	Kw	Bore (mm)	No.	Stroke (mm)		L/min		Dimensions	Capacity	Max Pressure	
									Ø mmxmm	Liter	Kg/cm²	
VA-51	0.5	0.37	51	2	42	498	85	8	Ø 300x910	60	10	55
VA-65	1	0.75	65	2	44	477	139	8	Ø 300x1050	70	10	70
TA-65	2	1.5	65	3	48	633	302	8	Ø 300x1050	70	10	90
VA-80	3	2.2	80	2	60	651	393	8	Ø 350x1160	105	10	130
TA-80	5.5	4	80	3	60	875	791	8	Ø 390x1410	155	10	188
VA-100	7.5	5.5	100	2	70	955	1050	8	Ø 485x1440	245	10	270
TA-100	10	7.5	100	3	70	888	1465	8	Ø 485x1760	304	10	340
TA-120	15	11	120	3	80	805	2183	8	Ø 485x1760	304	10	445
TA-125	20	15	125	3	90	913	3022	8	Ø 640x1760	500	10	540





## TWO-STAGE AIR-COOLED AIR COMPRESSORS

Model	Motor					Comp R.P.M	Piston Disp.	Working Pressure (Kg/cm <sup>2</sup> G)	Air Receiver			Net Weight ( kg )
	HP	kW	Bore (mm)		Stroke (mm)		L/min		Dimensions	Capacity	Max Pressure	
										Liter	Kg/cm <sup>2</sup>	
HVA-65	1	0.75	65 42	1 1	44	742	108	12	Ø 300x1050	70	13.5	90
HTA-65	2	1.5	65 51	2 1	48	742	236	12	Ø 300x1050	70	13.5	100
HTA-65H	3	2.2	65 51	2 1	48	916	292	12	Ø 350x1160	105	13.5	115
HTA-80	5.5	4	80 65	2 1	60	954	575	12	Ø 390x1410	155	13.5	200
HTA-100	7.5	5.5	100 80	2 1	70	691	760	12	Ø 490x1440	245	13.5	315
HTA-100H	10	7.5	100 80	2 1	70	907	997	12	Ø 490x1760	304	13.5	350
HTA120	15	11	120 100	2 1	80	863	1560	12	Ø 490x1760	304	13.5	450

## TWO-STAGE AIR-COOLED AIR COMPRESSORS

Model	Motor		Cylinder			Comp R.P.M	Piston Disp.	Working Pressure (Kg/cm <sup>2</sup> G)	Air Receiver			Net Weight ( kg )
	HP	kW	Bore (mm)	No.	Stroke (mm)		L/min		Dimensions	Capacity	Max Pressure	
									Ø mmxmm	Liter	Kg/cm <sup>2</sup>	
HTA-65H-VT	3	2.2	65 51	2 1	48	916	292	12	Ø 640x910	245	13.5	210
HTA-80 -VT	5.5	4	80 65	2 1	60	954	575	12	Ø 640x910	245	13.5	270
HTA-100-VT	7.5	5.5	100 80	2 1	70	691	760	12	Ø 640x910	245	13.5	245
HTA-100H-VT	10	7.5	100 80	2 1	70	907	997	12	Ø 640x910	245	13.5	360

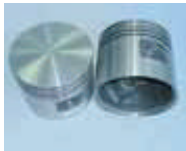
A SERIES AIR COMPRESSORS



D-SERIES AIR COMPRESSORS

Model	Motor		Cylinder			Comp R.P.M	Piston Disp.	Working Pressure (Kg/cm <sup>2</sup> G)	Air Receiver			Net Weight ( kg )
	HP	kW	Bore (mm)	No.	Stroke (mm)				Dimensions	Capacity	Max Pressure	
							Ø mmxmm		Liter	Kg/cm <sup>2</sup>		
D-1	0.5	0.37	51	1	42	807	69	7	Ø 244x720	33	10	40
D-2	1	0.75	51	2	42	742	127	7	Ø 300x910	60	10	60
D-3	2.2	1.65	65	2	44	1006	294	7	Ø 300x1050	70	10	82
D-4	3	2.2	65	3	48	757	362	7	Ø 350x1160	105	10	110

PISTON



CONNECTING RODS



BEARING



RING





## EASY TO WORK WITH

Just as you get personal attention from FS-Curtis when selecting equipment, you're also supported worldwide by great people. You can count on the global FS-Curtis staff and representatives to listen to your needs and work with you to develop the solution that's best for your situation. Our people are committed to serving you well and FS-Curtis provides extensive training in the field and at our St. Louis headquarters to ensure that you have the support you need.

In addition, authorized FS-Curtis distributors use genuine FS-Curtis parts, lubricants and filter kits to maximize the service life of your equipment. And with a nationwide network of service centers, you don't need to worry about added downtime waiting for parts.

## QUALITY PARTS MATTER

At FS-Curtis, quality is never compromised. That's why we control production using ISO 9001:2008 and ISO 14001:2004 standards, and it's also why we maintain a large inventory of replacement parts.

Using only genuine FS-Curtis replacement parts not only helps ensure continued reliable service of your equipment, but the large inventory also helps keep parts affordable and available. We're dedicated to maximizing your productivity, and that includes maximizing your uptime.

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**Through the dependability of our people and our quality-focused manufacturing, FS-Curtis will continue to be a trusted name serving even more markets through our ever-growing global presence.**





**AUTHORIZED FS-CURTIS DEALER:**