KA Series

Oil Flooded Air Compressor



ajor manufacturer of rotary screw type compressors for both production and specialty applications since 1955, known world-wide as the number one supplier of specialty compressors. Kobelco Compressors (America), Inc. was established in 1988 to manufacture, supply and support a broad line of industrial compressors to U.S. and global markets. Using world class knowledge of design and engineering, we developed a low cost, superior product, matched with a dependable and efficient control system. Our success is in energy saving, high quality compressed air and dependable long term operation.

Direct Drive to COMPRESSION

KA Series Rotary Screw Air Compressors





Digital Control

Manufactured and Stocked In-House



Corporate office, manufacturing and warehouse - Elkhart, Indiana, USA

MPRESSORS

Quality and Dependability Through Design Design Features Installed on KA Series Models.

Overall Design Points;

- Easy access to all scheduled maintenance items from one side.
- Heavy duty construction still allows passage through a 36 inch door frame.

Air End;

- Advanced Patented Rotor design for lower noise, long life and maximum efficiency.
- Direct Drive (no gears) eliminates the need for periodical alignments and belt maintenance.
- Differential pressure lubrication which allows zero sump pressure.
- 5 Year Limited Warranty *(Reduction of warranty for 175 psig models)

2 Air/Oil Separator Tank;

- New cyclonic technology has proven exceptional separation performance.
- Proper lubrication level can be easily seen without having to shut down the compressor.
- No internal separator element, eliminating messy, time consuming replacement.

5 YEAR LIMITED WARRANTY

Spin on Filter Elements;

- Lubricant and Air/Oil Coalescing filters are simpler and quicker to replace with less cost.
- Oversized multiple stage air/oil separator results in below 2 ppm (W) oil carry over.

Cooling System;

- · Oversized coolers for optimum performance,
- low approach temperatures and longer lubricant life.
- · Integrated thermostat allows for reduced piping.

5 Motor;

• 208-230/460 volts NEMA, ODP motor with cast iron frame is standard. 200 volt is also available.

6 Digital Control;

- · User friendly featuring easy adjustments.
- · Solid-state reliability.
- · Diagnostic monitoring.
- · Analog option also available.

Energy Saving;

- Zero sump pressure during unload dramatically reduces energy consumption.
- EPAct efficient motors are standard and premium efficient motors are available.





KA Series Performance and Technical Data

CAPACITY, ACFM*

	Motor HP		15	20	25	30	40	50
5	Standard pressure model (Max operation 125PSIG)							
Z	Model		KA15-L	KA20-L	KA25-L	KA30-L	KA40-L	KA50-L
A	Capacity (@100PSIG)	ACFM	55	83	98	126	172	205
2	Capacity (@125PSIG)	ACFM	55	82	96	126	169	203
0	High pressure model (Max operation 175PSIG)							
2	Model		-	KA20-H	KA25-H	KA30-H	KA40-H	KA50-H
Ш	Capacity (@150PSIG)	ACFM	-	54	81	95	118	167
	Capacity (@175PSIG)**	ACFM	-	53	80	93	116	164

* Air delivery rating in accordance with CAGI/PNEUROP Standard PN2CPTC2.

** Operation at the pressure requires a change in warranty.

Model		KA15	KA20	KA25	KA30	KA40	KA50
Open model (Standard, Base mount)							
L	Inches	63	63	63	63	65	65
W	Inches	32.5	32.5	32.5	32.5	34	34
Н	Inches	37.7	37.7	37.7	37.7	45.25	45.25
Weight [^]	Lbs.	775	775	775	775	995	995
Sound Enclosed model (Optional, Base mount)							
L	Inches	69	69	69	69 (81*)	74	74
W	Inches	33.5	33.5	33.5	33.5	33.5	33.5
Н	Inches	39.5	39.5	39.5	39.5	46.5	46.5
Weight ^A	Lbs.	1070	1070	1070	1070	1550	1550
Tank mounted model (Optional)							
Tank Volume		120**/	200***	** 200			
L*/ L**	Inches	69/79	69/79	69/79	69/79(81*)	79	79
W*/ W**	Inches	34	34	34	34	34	34
H*/ H**	Inches	67.7/75.5	67.7/75.5	67.7/75.5	67.7/75.5	81.25/82.5	81.25/82.5

* L=81 inches for 30HP Standard pressure model only.

** For Open model.

*** For Enclosed Model

Weights are approximate and do not include shipping pallet/skid weights.

Kobelco authorized maintenance replacement items are stocked and readily available to promote optimum performance. Ask your Kobelco representative for all the details.



Kobelco Compressors (America), Inc.

3000 Hammond Avenue Elkhart, Indiana 46516 Phone: (574) 295-3145 FAX: (574) 293-1641 E-mail: kasales@kocoa.com www.kocoa.com





Kobelco KA Series Oil Flooded Rotary Screw Air Compressor Model KA25E-VFD

Equipment & Features

- 1. Airend: 108mm male and female rotor with a 4-6 lobe combination.
 - a. Female drive.
 - b. Single row of tapered roller bearings on both suction and discharge end.
 - c. Full operating pressure inlet regulated to 60 psig for extended life. Teflon® O-Ring insures positive seat.
 - d. Direct drive system. Motor and airend are connected through a heavy duty jaw type coupling for permanent precise alignment.
 - e. A redundant shaft seal on drive shaft with suction return for a no-leak shaft.
 - f. Modulating inlet valve.
- 2. Drive Motor: 30 horsepower Inverter Duty with 1.0 service factor standard.
 - a. Standard Dual Voltage 230/460
 - b. "C" faced ODP motor standard.
 - c. Single shaft configuration.
- 3. Cooling System: Air-cooled Up-draft type.
 - a. Combination lubricant / air cooler with buffer plates that allow for thermal growth and increased performance.
 - b. Secondary 2hp fan motor with a 1.15 S.F. standard
 - c. Manifold mounted thermostat.
 - d. Ambient conditions can reach as high as 115° F.
 - e. Lubricant heat rejection of 2230 BTU / min.
- After-cooler: Oversized air-cooled after-cooler creates a low approach temperature of only 16° F at standard atmospheric conditions.
 a. Aftercooler heat rejection of 533 BTU / min.
- 5. Lubricant Separation System:
 - a. Multi stage separation system achieves less that 2 PPM / wt lubricant carry over at full operating pressure.
 - b. Easy to change spin on separator element creates less down time with less mess and disposal.
 - c. Kobelco's cyclonic separation technology is second to none. The lower challenge rate to the spin-on separator increases filter life and lower PPM carry-over.
- Compressor Lubricant: Kobelube 46 Poly Alpha Olefin (PAO) lubricants are manufactured from the highest quality synthetic hydrocarbon base-stocks and advanced additive technology. Kobelube lubricants have low pour points, high viscosity indexes and excellent water demulsibility.
- 7. Compressor Control: Variable Frequency Drive with 4:1 Turndown Capability
 - a. Automatic unloading / reloading
 - b. Sump pressure is decreased to atmospheric pressure during unload mode for additional power savings.
 - c. Adjustable timer to shutdown the compressor if it runs in the unloaded state for a predetermined amount of time. System automatically restarts if system pressure falls below set point.
 - d. Run mode allows the compressor to continuously run unloaded without shutting down.
- 8. Gauges and Indicators:
 - a. Redundant Digital and Analog System pressure
 - b. Digital Line pressure
 - c. Digital Discharge temperature
 - d. Digital Hour meter
 - e. Digital Operating mode selector
 - f. Six Digital Service Timers: General Maintenance, Oil Life, Oil Filter, Coalescing Filter
- 9. Safety System:
 - a. ASME coded separator Vessel.
 - b. Oversized coded pressure release valve to accommodate the full capacity of the compressor.
 - c. High temperature shut down switch which is placed directly in the discharge air stream.
 - d. E-stop button.
 - e. Pressure release lubricant fill cap.
 - f. Control line filtration with auto drain prevents hydraulic lock of the system controls.
 - g. Motor coupling safety guards.
- 10. Miscellaneous:
 - a. Factory filled with Kobelube 46.
 - b. Discharge check valve.
 - c. One-piece thermostat manifold for carefree lubricant thermal control.



Model KA25E-VFD

Specifications

General Data					
Design	Up Draft w/ Secondary Fan Motor.				
Driving Method	Variable Speed Direct Drive				
Full Load Operating Pressure	PSIG	125			
Max. Operating Pressure	PSIG	130			
Min. Operating Pressure	PSIG	50 - 60			
Free Air Delivery (@ 100psig)	ACFM	98			
Ambient Temperature (Min /					
Max)	°F	32 / 115			
Noise Level @ 1 Meter	dB(A)	70			
Voltage	V	230-460			
Fequency	Hz	60			
Starting Method	-	Variable Frequency			
Shipping Weight (lbs)**	Base	1200			
	Tank	1350			
Air Discharge Piping Size	in	1-1/4" NPT			
Typical Lubricant Carry Over	PPM	< 2.0 ppm (w)			

Air End Data					
Rotor Diameter	mm	108 MM			
L / D Ratio		2.1			
Drive Rotor		Female			
Male Rotor Speed	RPM	2700			
Female Rotor Speed	RPM	1800			
Lubricant Fluid Flow @100 psig	GPM	10.2			

Energy Data					
Motor Output	HP	25			
Insulation Class		F			
Drive Motor Rotation		CW			
Drive Motor Speed	RPM	1800			
Fan Motor Speed	RPM	1800			
Full Load (125psig) Drive Motor HP	BHP	30			
Drive Mater 0.5	230-480 V	1.0			
Drive Motor S.F.	200-400 V	N/A			
Dimensions					

Length	in	85		
Width	in	32		
Height	in	47		
Topk Mount Hoight	120 Gal (in)	77		
Talik Would Height	200 Gal (in)	83		

Cooling Data					
Heat Rejection - Oil Cooler	kBTU / hr	134			
Heat Rejection - Aftercooler	kBTU / hr	32			
Aftercooler Approach (@ std Conditions)	°F	18° F			
Max Cooling Fan Backpressure	In / H2O	0.90			
Fan Flow	CFM	6950			
Total Lubricant Capacity	Gal	5.2			
Reservoir Lubricant Capacity	Gal	3.5			











K10-Z026 Rev.0