

# 100 & 75



SCREW COMPRESSORS  
**BUILT BETTER**  
100+ YEARS OF ENGINEERING & MANUFACTURING EXCELLENCE



## **K100 IROQUOIS & J75 MOHAWK**

**ROTARY SCREW AIR COMPRESSORS  
BY DV SYSTEMS**

**75HP & 100HP VARIABLE SPEED**

- › 100% CONTINUOUS DUTY OPERATION
  - › RUGGED AND RELIABLE
  - › HIGH-EFFICIENCY ROTARY AIRENDS
  - › EFFICIENT SEPARATOR SYSTEM
  - › SMALL FOOTPRINT
  - › SOLID AND SILENT DESIGN
- › **ENERGY-SAVING** MODELS EQUIPPED WITH DVS - DV VARIABLE SPEED

[www.dvsystems.ca](http://www.dvsystems.ca)



## K100 & J75

## 75HP & 100HP VARIABLE SPEED

THE K100 “IROQUOIS” AND J75 “MOHAWK” are fully engineered from the ground up as quiet, efficient and reliable air compressor packages integrating variable speed technology throughout the entire unit. From the powder coated heavy gauge, acoustically insulated steel cabinet to the high efficiency, oversized rotary screw air end and the direct drive TEFC inverter duty industrial power source, the entire system is designed to meet the most demanding applications.

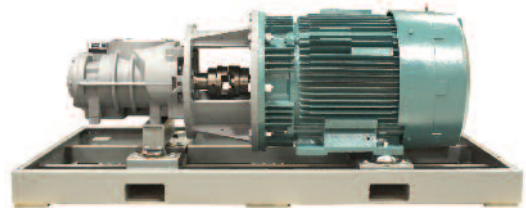
### ONE TO ONE DIRECT DRIVE:

Our drive connects the motor directly to the air end with a low maintenance Jaw In-Shear coupling, providing maximum transmission efficiency. This one-to-one drive reduces the number of components and allows top rated reliability.

The entire power unit is mounted on carefully engineered vibration isolation supports which minimize the transmission of motor and air end vibrations to the cabinet contributing to the overall quiet operation.

### ELECTRIC MOTOR:

TEFC inverter duty, high efficiency, 460 or 575v, 3-phase, 60Hz, 3600 rpm, class F insulation.



### ENERGY SAVING DVS DV VARIABLE SPEED DRIVE

The DVS Variable Speed drive integrates a robust variable frequency inverter with our CSC200 compressor controller to adjust the compressor speed to match the compressed air demands at all times. The power requirements of the compressor drop when the speed drops which saves a considerable amount of energy under normal operating conditions while also minimizing wear and tear on the compressor.

During startup the motor will run at its lowest speed and ramp up time in order to eliminate any current draw spike which adds further to the overall energy saving operation.

With the DVS drive system the compressor will maintain a target pressure to within one psi and this allows setting the operating pressure 20% lower compared to load/off load systems. Eliminating over pressurization in your air systems significantly reduces the amount of “phantom” air consumption caused by the higher air flow through leaks and air tools at higher pressures.

The DVS Drive system also integrates numerous power monitoring and fault protection technologies such as integrated EMC filter, line reactor, phase loss and overload protection. The unique super cooling fan integrated into cabinet allows for high switching frequency – low noise.



### CSC200 CONTROLLER

CSC 200 control used on variable speed drive units also has remote start/stop, fault signals and power failure restart capabilities.

- Real time clock with 28 settings for seven days of week.
- Start and stop based on real time clock.
- Remote start and stop terminal.
- Remote alarm signal digital output.
- Optional sequencing mode for up to four compressors.
- Built in ability to optimize energy use with the optional DVD.

## COMPRESSOR COMPONENTS

### ❖ AIR INTAKE FILTER

Our compressor is protected with a three stage 3 micron air intake filter. This premium filter extends the airend life and fluid change intervals. The filter is easily serviced with no tools required.

### ❖ AIR INTAKE VALVE

The air intake valve is normally closed and integrated with non-return valve. Designed to be extremely reliable and to have a very low pressure drop under all operating conditions. The unique profile valve and throat design creates a 25% increased air flow area when totally open for minimal pressure drop and fewer components and quality materials ensure reliable operation.

### ❖ MINIMUM PRESSURE VALVE

Two-stage valve that allows the air to flow to the heat exchanger if the compressed air pressure is above 60 psi, where it is cooled and then exits the unit. Includes a non-return valve to prevent back flow into compression element. Easy access for servicing. Anodized aluminum and brass components to prevent corrosion.

### ❖ AIREND:

All DV air ends are carefully matched to the overall package operating specifications to attain the most efficient and reliable overall performance. As direct drive packages, both the J and K air ends are large displacement, low speed rotary screw air ends (1500 – 4000 rpm) which significantly extends bearing life and lubricant breakdown rate. Larger displacement also means that the compression loads are distributed over larger surface areas with results in less material deflection and better air – coolant distribution. Rotor profiles make use of the latest technology in profile geometry in order to deliver high efficiency, long life and low noise. Shaft bearings and the materials used in the rotors and housings must meet strict quality standards. All of the components are precision machined and ground on state of the art equipment in ISO 9001 facilities.

### ❖ COOLER

Aluminum block type air-air aftercooler to cool the compressed air as it leaves the unit combined with the air-oil cooler to remove the heat generated in the oil during compression and to optimize the airend temperature for efficient operation. Large surface area, easy to clean and remove.

### ❖ AIR / OIL SEPARATOR VESSEL:

J75 and K100 are fitted with an optimized high-efficiency separation system specifically designed for variable flow application inherent with variable speed air compressor. Most of the oil is initially separated from the air by centrifugal force in the separator tank. Any remaining oil aerosol is separated by a two-stage filter in the separator vessel. The oil level is verified by the easy-to-read oil level indicator and the service is done by an easily accessible valve and hinged top cover.

### ❖ “CYCLONE” MOISTURE SEPARATOR:

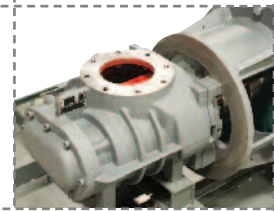
The cyclone moisture separator uses centrifugal separation to remove bulk liquids from the compressed air as it leaves the compressor.

### ❖ THERMOSTATIC BYPASS VALVE:

A brass valve integrated in the oil filter housing to assure that the compressor reaches its optimal temperature immediately after start up to eliminate any risk of moisture buildup in the oil and to guarantee highly efficient operation.

### ❖ DUAL OIL FILTER:

The two oil filters ensure an extremely high filtration efficiency (10 microns) to protect the synthetic lubricant quality and improve the airend lifetime.





## K100 & J75 ROTARY SCREW AIR COMPRESSOR

Model	Motor (HP)	dBA	Operating pressure (psi)	Capacity @ operating pressure(SCFM)	Dimensions L x W x H (in.)	Weight (lbs)
J75 VSD MOHAWK	75	76	100	341	74 x 47 x 78 3/4	2858
			150	285		
			175	265		
K100 VSD IROQUOIS	100	76	100	463	74 x 47 x 78 3/4	3300
			150	388		
			175	355		

### SOLID AND SILENT DESIGN:

Our compressors are designed with solid steel base frames and floors. The airend/motordrive module and separator tank are each mounted on vibration isolation mounts to eliminate all strain on piping and wiring and to reduce noise. This design allows a low noise level of 76 dBA.

### COOLING FAN:

Centrifugal cooling fan, with high efficiency backward inclined aluminum blades. Dynamically balanced for low vibration and noise reduction. Integrated rotor and thermally protected motor. Easy access for servicing.

### LUBRICATION SYSTEM:

DV Lube synthetic oil is tested for extreme conditions and explicitly qualified for high performance and long lifetime expectations.

### ACCESSORIES:

DV Systems provide a range of clean air treatment products, including dryers, filters, separators, air receivers, ETC oil-free converters, EcoCentre Compressor Management Systems.



BUILT BETTER



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As we are continually trying to improve our products, specifications are subject to change without notice.