



# HallScrew

## COMPRESSOR RANGE

**Single screw compressor technology**  
for industrial refrigeration, air conditioning  
and heat pump systems



# J & E Hall International...

For more than 200 years, J & E Hall International has pioneered the development and application of refrigeration technologies. Today the company is recognised as a leading manufacturer and after sales provider for refrigeration and air-conditioning products worldwide.

## Single Screw Technology

Key to the success of the HallScrew single screw compressor is its outstanding reliability. Only three basic moving parts are involved, a main rotor which meshes with two diametrically opposed star wheels and results in balanced compression. Compressors are extremely robust and boasts long bearing life over 100,000 hours.

The HallScrew also features a high efficiency capacity control mechanism to regulate the capacity with corresponding reduction in power input. For ease of maintenance, the side casing can be removed to give access to all parts without removing the machine from its installation.

## Star Wheel

J & E Hall use low friction composite material "HallPlas" in the compression process to ensure high efficiency and reliability. "HallPlas" material was developed using aerospace technology and can withstand the toughest operating conditions with all types of refrigerant.

## Applications

J & E Hall manufactures screw compressors using state of the art production equipment for industrial refrigeration, air conditioning and heat pump systems. HallScrew open and semi-hermetic compressors are used in the most varied applications from deep freezing through to standard refrigeration in retail, brewing, process plant, petrochemical and more.

How **single screw** technology works...



## Benefits

- ▶ Ease of installation
- ▶ Ease of maintenance
- ▶ Engineered for quiet operation
- ▶ Outstanding reliability
- ▶ Superior efficiency
- ▶ Wide ranging cooling capacities



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COMPRESSOR RANGE

## Open Compressor Range

**HSO Open Range** designed for refrigeration, air conditioning and heat pump applications

### ▶ HSO 3200



- 4 sizes: 3216, 3218, 3220 and 3221
- Displacement at 50Hz: 286/343/415/471 m<sup>3</sup>/h

### ▶ HSO 4200



- 4 sizes: 4221, 4222, 4223 and 4224\*
- Displacement at 50Hz: 504/611/716/828 m<sup>3</sup>/h

### ▶ HSO 2000



- 4 sizes: 2024, 2028, 2031 and 2035
- Displacement at 50Hz: 853/1273/1728/2486 m<sup>3</sup>/h

#### General information for the range

- Suitable for all refrigerants including ammonia
- Built in capacity control (except 2000 series)
- Economiser facility
- External or liquid injection cooling
- Single piece casing

## Semi-Hermetic Compressor Range

**HSM & HSL Semi-Hermetic Range** designed for medium & low temperature applications

### ▶ HSM/L 3100



- 4 sizes: 3118, 3120, 3121 and 3122
- Displacement at 50Hz: 175/213/250/292 m<sup>3</sup>/h

### ▶ HSM/L 3200



- 4 sizes: 3216, 3218, 3220 and 3221
- Displacement at 50Hz: 286/343/415/471 m<sup>3</sup>/h
- Developed for parallel multi compressor systems

### ▶ HSM/L 4200



- 3 sizes: 4221, 4222, 4223 and 4224\*
- Displacement at 50Hz: 504/611/716/828 m<sup>3</sup>/h
- Required external oil separator and oil support system for maximum efficiency

#### General information for the range

- Optimised for R404A, R507, & R134a
- High efficiency built in 3 phase, 2 pole motor 50/60Hz
- Motor designed for star/delta or direct on-line
- Built in capacity control
- Economiser facility
- Oil injected for maximum reliability

\* Limited operating conditions



## Semi-Hermetic Compressor Range

**HSS Semi-Hermetic Range** designed for high temperature applications

### ▶ HSS 3100



- 4 sizes: 3118, 3120, 3121 and 3122
- Displacement at 50Hz:  
175/213/250/292 m<sup>3</sup>/h

### ▶ HSS 3200



- 4 sizes: 3216, 3218, 3220 and 3221
- Displacement at 50Hz:  
286/343/415/471 m<sup>3</sup>/h
- Fitted stainless steel mesh type  
integral oil separator

### ▶ HSS 4200



- 4 sizes: 4221, 4222, 4223 and 4224\*
- Displacement at 50Hz:  
504/611/716/828 m<sup>3</sup>/h
- Required external oil separator  
and oil support system for  
maximum efficiency

#### General information for the range

- Optimised for R134a & R407C
- High efficiency built in 3 phase,  
2 pole motor 50/60Hz
- Built in capacity control
- Balanced loading on main bearings
- Liquid injection connections
- Economiser facility
- Built in oil filter

## Proven Capability

#### Pharmaceutical case study

Bespoke chillers using HallScrew compressors play a key role in drugs manufacture at a large pharmaceutical plant.

- ▶ 6 HallScrew 3100 series compressors
- ▶ Controls temperatures ranging from 50°C to -60°C



#### Food Processing case study

HallScrew compressors reduce cold store energy bills by more than 20%

- ▶ 100,000 sqft cold store
- ▶ Meat kept at -21°C
- ▶ 2 HallScrew compressors plus one standby



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