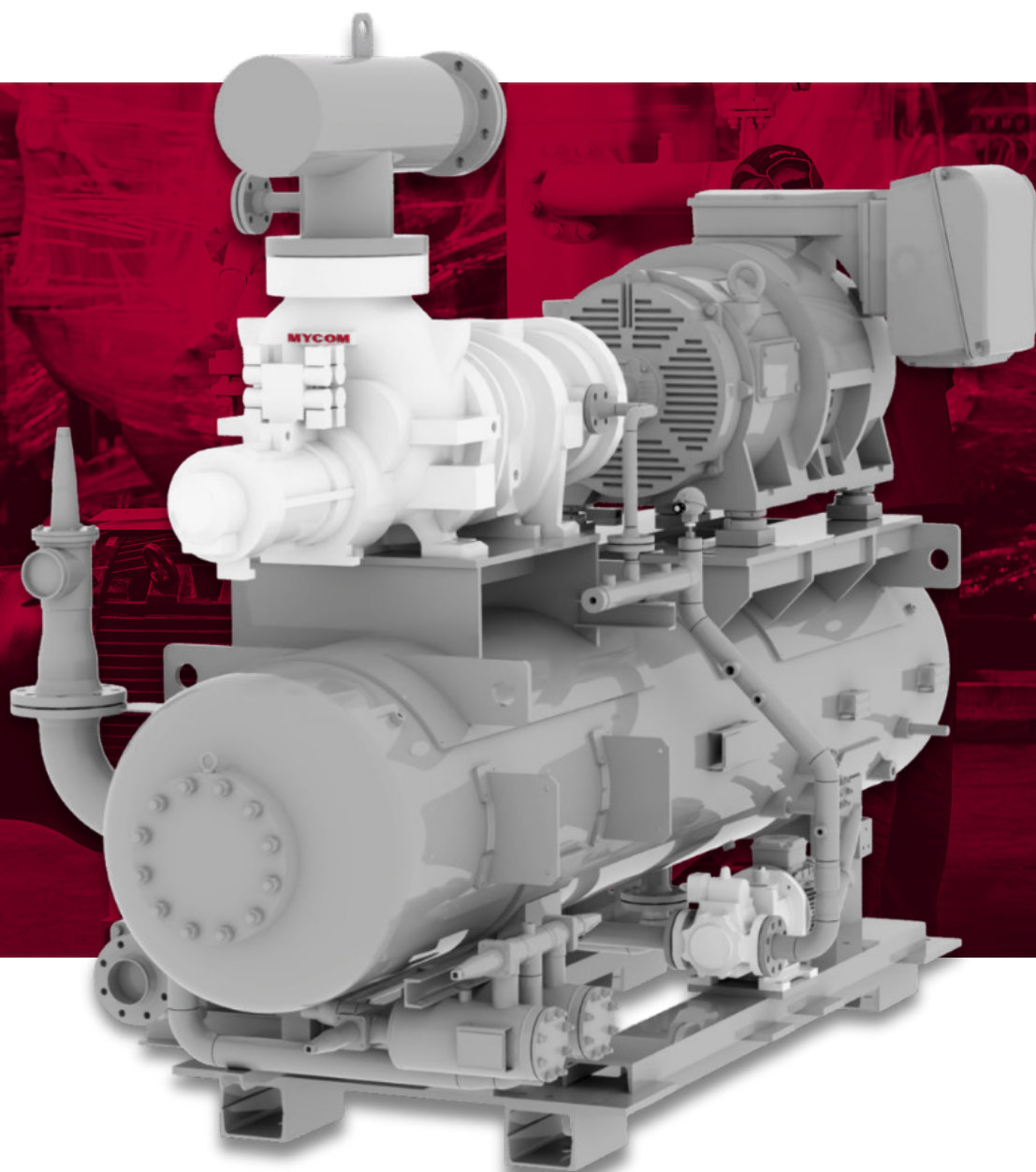


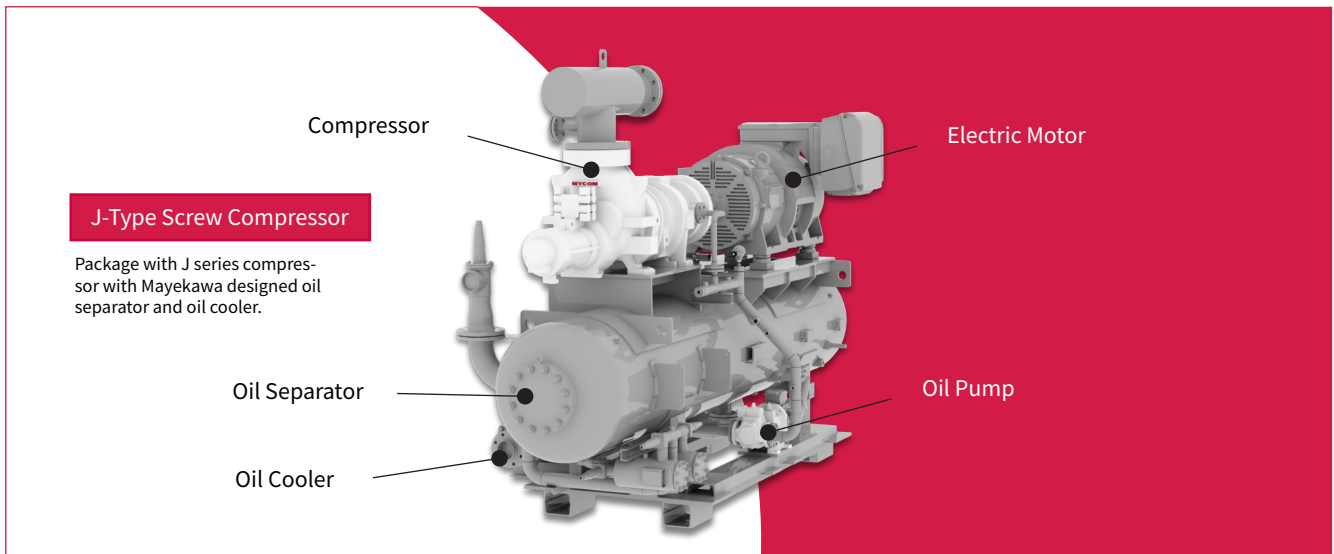
# J Series

Screw compressor unit

**ΜΑΥΕΚΑΨΑ**  
**MYCOM**



*“Delivering benefits through  
dialogues and technology”*



## J-Type Screw Compressor

Package with J series compressor with Mayekawa designed oil separator and oil cooler.

### Description

The J-series screw compressor represents a new generation of compression technology for industrial refrigeration systems. **With its innovative “J” rotor profile, and a variable internal volume ratio, it’s engineered to deliver maximum energy efficiency, outstanding COP performance, and reliable operation under demanding conditions.**

Its robust design and advanced control concept make the J-series an ideal choice for modern plants looking to simplify system layout. The J-series can calculate the optimum volume ratio from the measured operating pressures adapting its operation if needed.

### Innovative rotor profile

The new 5/6-lobe rotor design improves meshing and boosts overall efficiency.

### High COP & energy savings

Optimized compression reduces internal losses, delivering higher COP and lower power consumption.

### Automatic Vi regulation

Three Vi settings (2.50 / 3.50 / 5.00) adjust automatically to ensure optimal performance under all conditions.

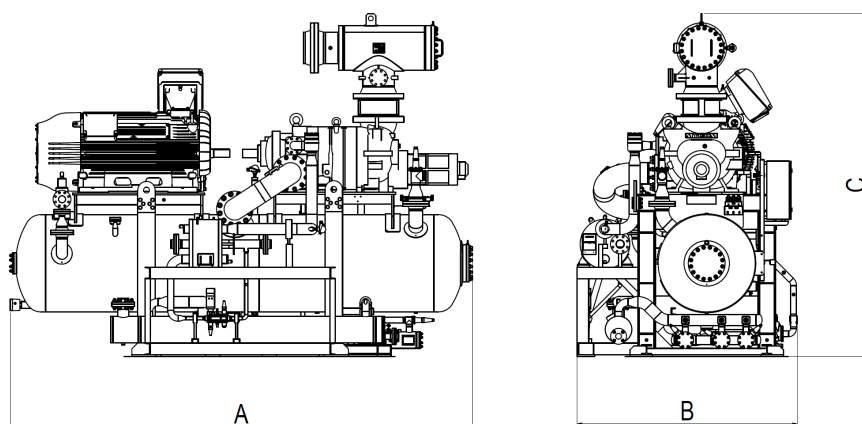
### Intelligent control

The controller manages Vi adjustment and overall compressor operation for reliable, efficient performance.

### Safe operation

Continuous monitoring and built-in protections ensure safe and stable operation.





60 Hz - R717

| Model | Nominal capacities in kW at 60 Hz |      |           |      |            |      | Unit dimensions |      |      | Weight |
|-------|-----------------------------------|------|-----------|------|------------|------|-----------------|------|------|--------|
|       | -5/+35°C                          | COP  | -10/+35°C | COP  | -30/+35°C* | COP  | A               | B    | C    | kg     |
| J170S | 379,8                             | 4,68 | 309,8     | 3,91 | 146,8      | 2,13 | 3000            | 1600 | 2400 | 3100   |
| J170M | 486,5                             | 4,63 | 398       | 3,9  | 191,4      | 2,18 | 3000            | 1600 | 2400 | 3200   |
| J170L | 635,8                             | 4,71 | 520,4     | 3,97 | 250,3      | 2,24 | 3000            | 1700 | 2400 | 3500   |
| J220S | 846,6                             | 4,52 | 693,3     | 3,79 | 347,0      | 2,18 | 4100            | 1700 | 2800 | 4800   |
| J220M | 1113,6                            | 4,69 | 912,1     | 3,94 | 456,8      | 2,26 | 4100            | 1700 | 2800 | 5000   |
| J220L | 1461,8                            | 4,85 | 1196,8    | 4,07 | 597,8      | 2,33 | 4300            | 2200 | 3200 | 5400   |
| J280S | 1881,2                            | 4,95 | 1540,2    | 4,24 | 769,6      | 2,52 | 4800            | 2200 | 3800 | 9000   |
| J280M | 2469,3                            | 5,01 | 2021,8    | 4,28 | 1010,2     | 2,55 | 4900            | 2300 | 3800 | 9200   |
| J280L | 3249,6                            | 5,07 | 2659,6    | 4,33 | 1325,4     | 2,58 | 5000            | 2400 | 3900 | 9300   |

Sub-cooling of 0°C and Super-heating of 0°C.

\*Data with closed flash economizer

Dimensions and Weights, include closed flash economizer (when applicable) and control panel, are indicative

Weight, excluding motor &amp; oil

## Specifications

| Items                         | 170J                                                 |      |     | 220J |      |      | 280J |      |      |      |
|-------------------------------|------------------------------------------------------|------|-----|------|------|------|------|------|------|------|
|                               | S                                                    | M    | L   | S    | M    | L    | S    | M    | L    |      |
| Refrigerant                   | Ammonia, HFC and others                              |      |     |      |      |      |      |      |      |      |
| Bare compressor weight        | kg                                                   | 700  | 730 | 775  | 1270 | 1330 | 1400 | 2300 | 2450 | 2600 |
| Minimum rotation              | rpm                                                  | 1450 |     |      |      |      |      |      |      |      |
| Maximum rotation              | rpm                                                  | 4500 |     |      |      |      |      |      |      |      |
| Displacement @2950rpm         | m3/h                                                 | 390  | 507 | 659  | 856  | 1114 | 1447 | 1886 | 2451 | 3190 |
| Displacement @3550rpm         | m3/h                                                 | 469  | 610 | 793  | 1030 | 1340 | 1741 | 2269 | 2949 | 3839 |
| Design pressure               | barG                                                 | 35   |     |      |      |      |      |      |      |      |
| Maximum suction pressure      | barG                                                 | 8    |     |      |      |      |      |      |      |      |
| Minimum suction pressure      | barG                                                 | -0,8 |     |      |      |      |      |      |      |      |
| Maximum discharge pressure    | barG                                                 | 32   |     |      |      |      |      |      |      |      |
| Capacity control              | S type and M type: 25% to 100% / L type: 30% to 100% |      |     |      |      |      |      |      |      |      |
| Step Vi control               | Standard: 2.5 to 5.0                                 |      |     |      |      |      |      |      |      |      |
| Minimum suction temperature   | °C                                                   | -60  |     |      |      |      |      |      |      |      |
| Maximum discharge temperature | °C                                                   | 100  |     |      |      |      |      |      |      |      |
| Integrated sution check valve | -                                                    | O    |     |      | O    |      |      | X    |      |      |
| Integrated solenoid valve     | -                                                    | O    |     |      | O    |      |      | X    |      |      |

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