

## Choose the right lubricants for low GWP refrigerants

| Refrigerant type                               | Compressor type                    | <b>Evaporating T°C</b>           | Typical CPI Solutions                                    |
|--|------------------------------------|----------------------------------|--|
| HFO  |                                    |                                  |  |
| Solstice® ze (R-1234ze)                        | Reciprocating                      | -20°C to +10°C                   | Icematic Range   |
|  | Centrifugal                        |                                  | Icematic Range   |
|  | Screw                              |                                  | Emkarate RL170H  |
| Solstice® yf (R-1234yf)                        | Dagingagatinga                     |                                  | Emkarate RL 32-3 MAF, Solest 31HE,                       |
|  | Reciprocating                      |                                  | Icematic Range   |
|  | Centrifugal                        |                                  | Icematic Range   |
|  | Hermetic                           |                                  | Emkarate RL85HM  |
|  | Screw                              |                                  | Emkarate RL170H  |
| Solstice® zd (R-1233zd)                        | Reciprocating                      |                                  | Consult us   |
|  | Centrifugal                        |                                  | Consult us   |
|  | Screw                              |                                  | Consult us   |
| HFO BLENDS                                     |                                    |                                  |  |
| Solstice® L40X (R-455A)                        | Reciprocating                      | -50°C to -30°C                   | Emkarate RL 32-3 MAF, RL68H, Solest 31HE, Icematic Range |
|  | Centrifugal                        |                                  | Emkarate RL220H, Icematic Range                          |
|  | Screw                              |                                  | Emkarate RL170H  |
| Solstice® N40 (R-448A) Solstice® 449A (R-449A) | Reciprocating                      | -40°C to 0°C                     | Emkarate RL 32-3 MAF, RL68H, Solest 31HE, Icematic Range |
|  | Centrifugal                        |                                  | Emkarate RL220H, Icematic Range                          |
|  | Screw                              |                                  | Emkarate RL170H  |
| Solstice® 513A (R-513A)                        | Reciprocating                      |                                  | Emkarate RL 32-3 MAF, RL68H, Solest 31HE, Icematic Range |
|  | Centrifugal                        |                                  | Emkarate RL220H, Icematic Range                          |
|  | Screw                              |                                  | Emkarate RL170H, Icematic Range                          |
|  | Scroll                             |                                  | Emkarate RL32-3MAF, Solest 68. Icematic Range            |
| Solstice® L41y (R-454B)                        | Reciprocating                      | -50°C to -30°C                   | Emkarate RL 32-3 MAF, RL68H, Solest 31HE, Icematic Range |
|  | Centrifugal                        |                                  | Emkarate RL220H, Solest 68-220, Icematic Range           |
|  | Scroll                             |                                  | Emkarate RL3MAF  |
| Solstice® N71 (R-471A)                         | Screw                              | -40°C to 0°C                     | Emkarate RL170H  |
|  | Reciprocating                      |                                  | Emkarate RL68H, Icematic Range                           |
|  | Centrifugal                        |                                  | Emkarate RL220, Icematic Range                           |
|  | Screw                              |                                  | Emkarate RL170H  |
| Solstice® N15 (R-515B)                         | Reciprocating                      | -30°C to -10°C                   | Emkarate RL68H, Icematic Range                           |
|  | Centrifugal                        |                                  | Emkarate RL220H, Icematic Range                          |
|  | Screw                              |                                  | Emkarate RL1710H, Icematic Range                         |
| AMMONIA<br>R-717                               | Corowa.                            | -40°C to +10°C<br>-50°C to +10°C | CDI 1000 CDI 4600  |
|  | Screw Heat numn                    |                                  | CPI 1008, CPI 1009, CPI 4628  Icematic Range             |
| CO   | Heat pump                          |                                  | icematic Namye   |
| R-744  | Reciprocating                      | -55°C to -10°C                   | Emkarate RL68HB, RL100HB, RL85HB                         |
| HYDROCARBON                                    | recipiocatiiig                     | 1                                | LITINATALE INLUGITE, INLITED, REGULTE                    |
| R-290  | Sorowy & Contrifucal               | -30°C to+20°C                    | CDI 1507 CDI 1516  |
|  | Screw & Centrifugal  Reciprocating |                                  | CPI 1507, CPI 1516                                       |
|  | Reciprocating                      |                                  | CPI 1507, CPI 1516                                       |



