Carlyle

Performance you demand, quality you rely on.

06M


THE MOST ADVANCED
COMPRESSOR TECHNOLOGY AVAILABLE

# 06M RECIPROCATING COMPRESSOR WITH R410A REFRIGERANT

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# 06M RECIPROCATING COMPRESSOR


## Performance you demand, quality you rely on.

Whether you require air conditioning, process cooling or refrigeration, the 06M reciprocating compressor by Carlyle is the right choice for reliable, efficient operation unlike scroll compressor. The valve system in the 06M automatically adjusts to ever-changing operating conditions for maximum performance. An integrated positive displacement oil pump ensures reliable operation even under marginal lubrication. With the 06M, cylinder unloading is available over the entire product range, and unlike a scroll compressor is fully serviceable on-site will minimal downtime.

## 06M at a Glance

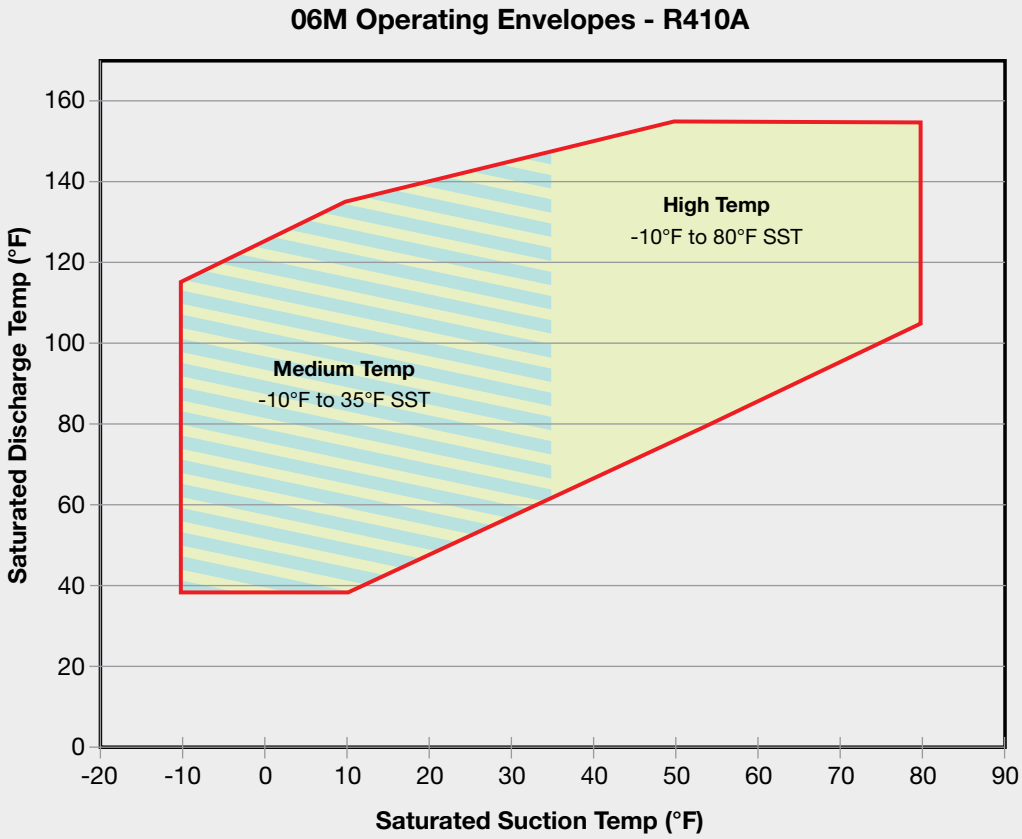
- R410A refrigerant
- Variable frequency drive (20Hz to 80Hz)
- Dual suction ports
- Wide operating envelope (-10°F to 80°F SST)
- Multiple unloading choices
- Reversible high flow oil pump
- Space saving footprint
- Service friendly
- Motor protection
- Advanced factory-installed motor and low oil protection
- UL and CSA Approved

## Model Offering and Physical Data Summary

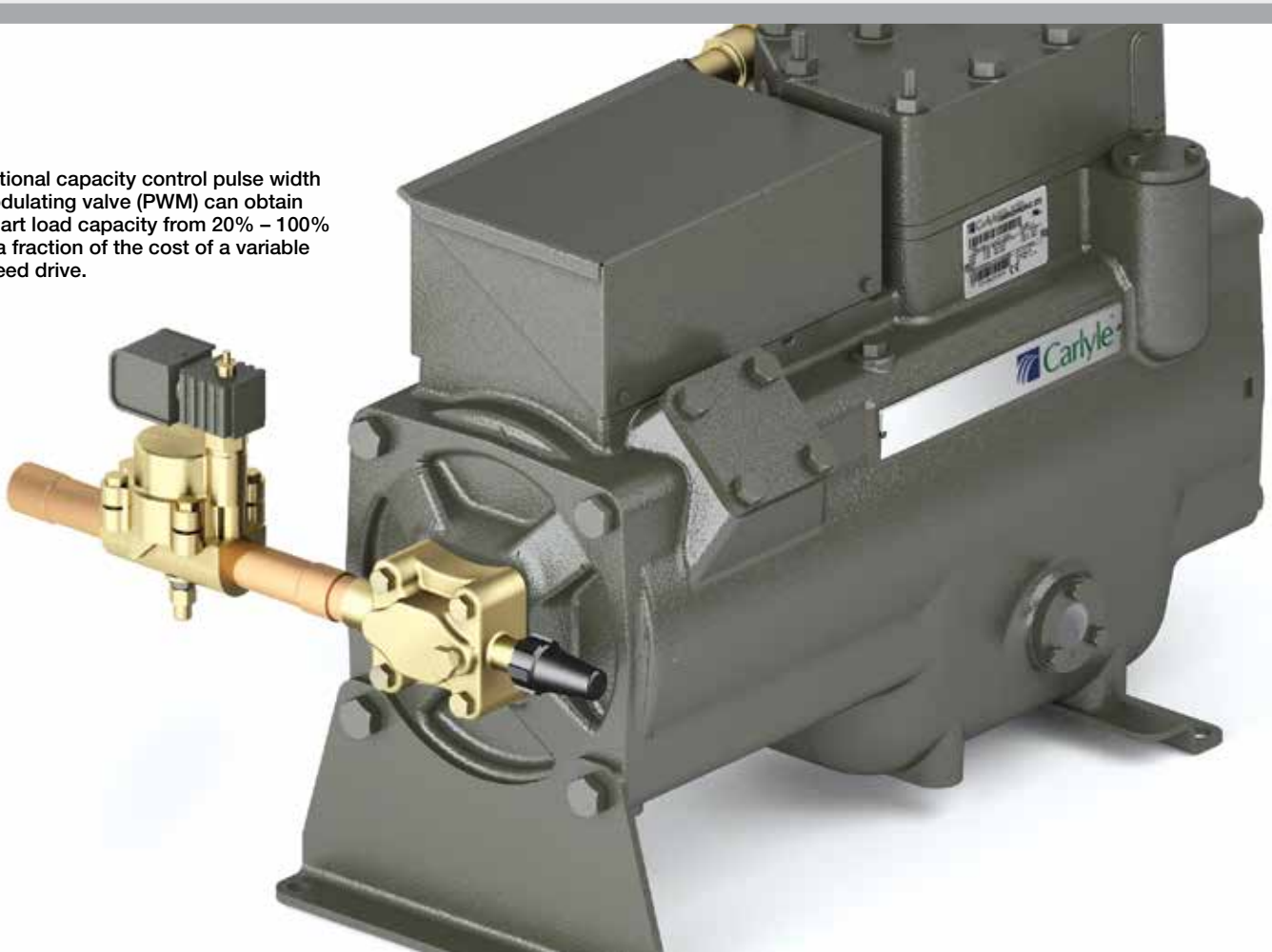
| Models | CFM | Number of Cylinders | Nominal HP | Suction Line Size | Discharge Line Size | Dry Weight (lbs) | Oil Charge (pints) |
|---|---|---|---|---|---|---|---|
| **Medium Temperature** | | | | | | | |
| 06MM015 | 15.5 | 3 | 7 | 1-1/8” | 7/8” | 379 | 5.8 |
| 06MM018 | 18.4 | 3 | 9 | 1-1/8” | 7/8” | 384 | 5.8 |
| 06MM021 | 21.2 | 3 | 11 | 1-3/8” | 1-1/8” | 387 | 5.8 |
| 06MM024 | 24.1 | 3 | 13 | 1-3/8” | 1-1/8” | 392 | 5.8 |
| **High Temperature** | | | | | | | |
| 06MA015 | 15.5 | 3 | 9 | 1-1/8” | 7/8” | 379 | 5.8 |
| 06MA018 | 18.4 | 3 | 11 | 1-1/8” | 7/8” | 384 | 5.8 |
| 06MA021 | 21.2 | 3 | 13 | 1-3/8” | 1-1/8” | 387 | 5.8 |
| 06MA024 | 24.1 | 3 | 15 | 1-3/8” | 1-1/8” | 392 | 5.8 |

Note: Normal operating speed is 1,750 RPM at 60 Hz.

## Operating Envelope




Optional capacity control pulse width modulating valve (PWM) can obtain a part load capacity from 20% – 100% at a fraction of the cost of a variable speed drive.



## Electrical Data Summary

| Compressor Model | Volt | MCC | RLA (1.4) | RLA (1.56) | LRA | Max kW | HP |
|---|---|---|---|---|---|---|---|
| **Medium Temperature** | | | | | | | |
| 06MM015J012200 | 208/230 | 44.2 | 31.6 | 28.3 | 183 | 12.8 | 7 |
| 06MM015J013200 | 380 | 26.8 | 19.1 | 17.2 | 111 | | |
| 06MM015J014200 | 460 | 22.1 | 15.8 | 14.2 | 91 | | |
| 06MM015J015200 | 575 | 17.7 | 12.6 | 11.3 | 73 | | |
| 06MM018K012200 | 208/230 | 51.5 | 36.8 | 33.0 | 215 | 15.7 | 9 |
| 06MM018K013200 | 380 | 31.2 | 22.3 | 20.0 | 130 | | |
| 06MM018K014200 | 460 | 25.8 | 18.4 | 16.5 | 108 | | |
| 06MM018K015200 | 575 | 20.6 | 14.7 | 13.2 | 86 | | |
| 06MM021L012200 | 208/230 | 59.8 | 42.7 | 38.3 | 269 | 18.8 | 11 |
| 06MM021L013200 | 380 | 36.2 | 25.9 | 23.2 | 163 | | |
| 06MM021L014200 | 460 | 29.9 | 21.4 | 19.2 | 135 | | |
| 06MM021L015200 | 575 | 23.9 | 17.1 | 15.3 | 108 | | |
| 06MM024M012200 | 208/230 | 70 | 50.0 | 44.9 | 305 | 21.9 | 13 |
| 06MM024M013200 | 380 | 42.4 | 30.3 | 27.2 | 185 | | |
| 06MM024M014200 | 460 | 35 | 25.0 | 22.4 | 153 | | |
| 06MM024M015200 | 575 | 28 | 20.0 | 17.9 | 122 | | |

## Electrical Data Summary

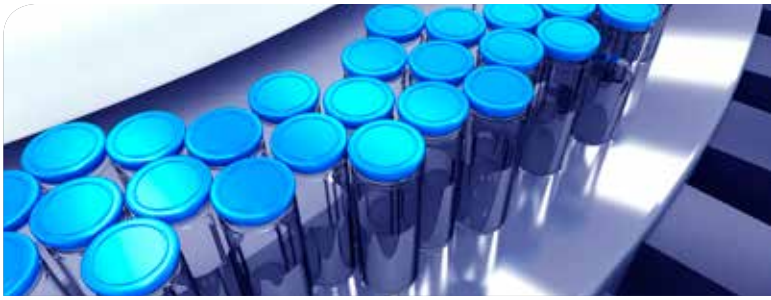
| Compressor Model | Volt | MCC | RLA (1.4) | RLA (1.56) | LRA | Max kW | HP |
|---|---|---|---|---|---|---|---|
| **High Temperature** | | | | | | | |
| 06MA015K012200 | 208/230 | 54.4 | 38.9 | 34.9 | 215 | 14.1 | 9 |
| 06MA015K013200 | 380 | 32.9 | 23.5 | 21.1 | 130 | | |
| 06MA015K014200 | 460 | 27.2 | 19.4 | 17.4 | 108 | | |
| 06MA015K015200 | 575 | 21.8 | 15.6 | 14.0 | 86 | | |
| 06MA018L012200 | 208/230 | 62.3 | 44.5 | 39.9 | 269 | 16.7 | 11 |
| 06MA018L013200 | 380 | 37.7 | 26.9 | 24.2 | 163 | | |
| 06MA018L014200 | 460 | 31.1 | 22.2 | 19.9 | 135 | | |
| 06MA018L015200 | 575 | 24.9 | 17.8 | 16.0 | 108 | | |
| 06MA021M012200 | 208/230 | 75.5 | 53.9 | 48.4 | 305 | 20.1 | 13 |
| 06MA021M013200 | 380 | 45.7 | 32.6 | 29.3 | 185 | | |
| 06MA021M014200 | 460 | 37.8 | 27.0 | 24.2 | 153 | | |
| 06MA021M015200 | 575 | 30.2 | 21.6 | 19.4 | 122 | | |
| 06MA024N012200 | 208/230 | 88.9 | 63.5 | 57.0 | 36 | 24 | 15 |
| 06MA024N013200 | 380 | 55.7 | 39.8 | 35.7 | 222 | | |
| 06MA024N014200 | 460 | 44.9 | 32.1 | 28.8 | 183 | | |
| 06MA024N015200 | 575 | 34.8 | 24.9 | 22.3 | 146 | | |

## Performance Data

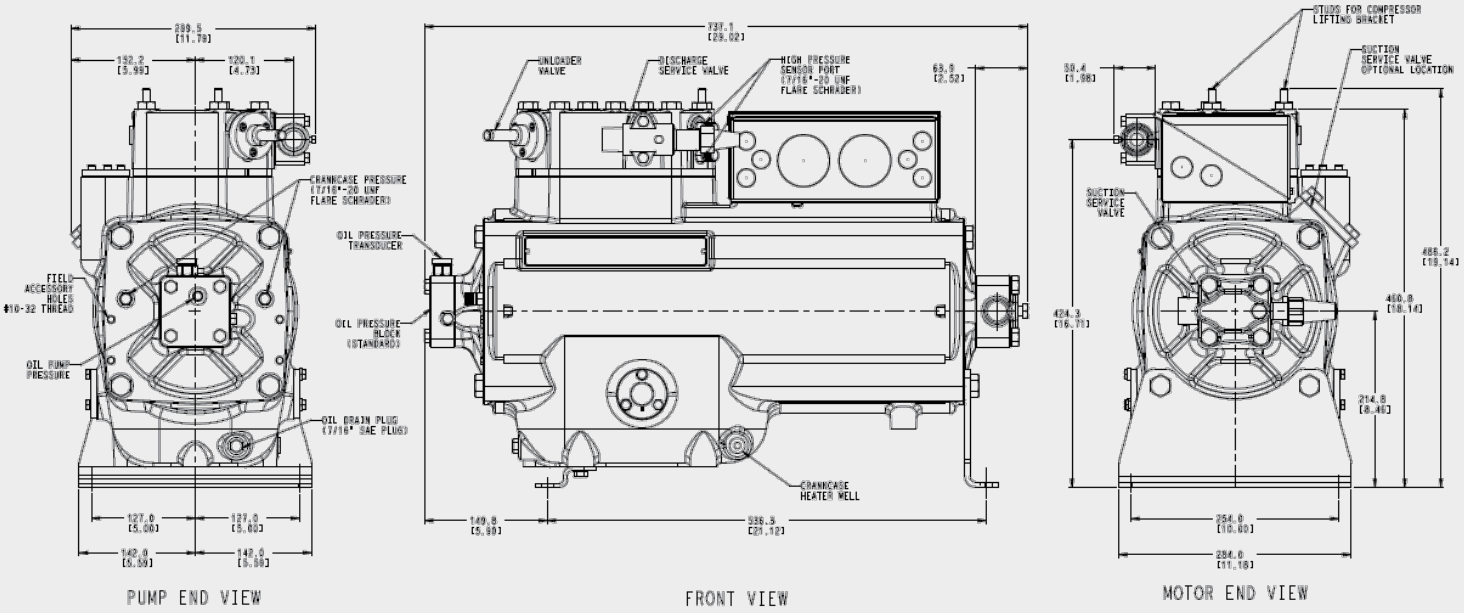
| Compressor Model | Condensing Temperature SDT (°F) | Q (Btu/hr)* P (kW) | Saturated Suction Temperature SST (°F) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Medium Temperature** | | | | | | | | | | |
| | | **60Hz** | **-10°** | **-5°** | **0°** | **5°** | **10°** | **15°** | **25°** | **35°** |
| 06MM015 | 90 | Q | 34,123 | 40,944 | 48,448 | 56,689 | 65,719 | 75,590 | 98,068 | 124,544 |
| | | P | 4,942 | 5,318 | 5,661 | 5,969 | 6,235 | 6,456 | 6,742 | 6,793 |
| | 110 | Q | 23,755 | 18,322 | 36,315 | 43,549 | 51,488 | 60,186 | 80,067 | 103,612 |
| | | P | 4,723 | 4,159 | 5,782 | 6,269 | 6,721 | 7,134 | 7,825 | 8,304 |
| | 130 | Q | 13,983 | 19,069 | 24,671 | 30,844 | 37,639 | 45,108 | 62,283 | 82,788 |
| | | P | 3,987 | 4,707 | 5,408 | 6,084 | 6,733 | 7,348 | 8,463 | 9,392 |
| 06MM018 | 90 | Q | 42,560 | 50,676 | 59,547 | 69,229 | 79,780 | 91,258 | 117,221 | 147,576 |
| | | P | 6,131 | 6,538 | 6,902 | 7,221 | 7,491 | 7,710 | 7,980 | 8,009 |
| | 110 | Q | 30,340 | 37,600 | 45,525 | 54,173 | 63,601 | 73,867 | 97,139 | 124,449 |
| | | P | 5,993 | 6,613 | 7,192 | 7,727 | 8,213 | 8,648 | 9,355 | 9,824 |
| | 130 | Q | 18,429 | 24,751 | 31,650 | 39,183 | 47,407 | 56,380 | 76,802 | 100,905 |
| | | P | 5,204 | 6,068 | 6,891 | 7,670 | 8,401 | 9,083 | 10,285 | 11,252 |
| 06MM021 | 90 | Q | 53,280 | 61,878 | 71,439 | 82,047 | 93,786 | 106,738 | 136,622 | 172,365 |
| | | P | 7,252 | 7,640 | 8,006 | 8,341 | 8,639 | 8,893 | 9,240 | 9,325 |
| | 110 | Q | 42,442 | 49,816 | 58,007 | 67,098 | 77,173 | 88,315 | 114,135 | 145,228 |
| | | P | 7,612 | 8,132 | 8,642 | 9,137 | 9,607 | 10,048 | 10,810 | 11,367 |
| | 130 | Q | 32,483 | 38,666 | 45,519 | 53,124 | 61,567 | 70,930 | 92,752 | 119,258 |
| | | P | 7,722 | 8,360 | 9,003 | 9,643 | 10,274 | 10,889 | 12,042 | 13,046 |
| 06MM024 | 90 | Q | 60,926 | 70,875 | 81,917 | 94,146 | 107,653 | 122,533 | 156,781 | 197,633 |
| | | P | 8,412 | 8,875 | 9,310 | 9,708 | 10,059 | 10,353 | 10,735 | 10,780 |
| | 110 | Q | 48,195 | 56,761 | 66,260 | 76,785 | 88,430 | 101,286 | 131,008 | 166,695 |
| | | P | 8,692 | 9,308 | 9,915 | 10,503 | 11,063 | 11,586 | 12,484 | 13,121 |
| | 130 | Q | 36,447 | 43,642 | 51,611 | 60,446 | 70,240 | 81,086 | 106,307 | 136,853 |
| | | P | 8,660 | 9,406 | 10,163 | 10,920 | 11,669 | 12,400 | 13,771 | 14,957 |

## Performance Data

| Compressor Model | Condensing Temperature SDT (°F) | Q (Btu/hr)* P (kW) | Saturated Suction Temperature SST (°F) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **High Temperature** | | | | | | | | | | |
| | | **60Hz** | **5°** | **10°** | **15°** | **20°** | **25°** | **30°** | **45°** | **55°** |
| 06MA015 | 90 | Q | 57,136 | 65,938 | 75,691 | 86,841 | 98,398 | 125,938 | 159,012 | 198,305 |
| | | P | 5.89 | 6.12 | 6.31 | 6.47 | 6.59 | 6.67 | 6.51 | 6.06 |
| | 110 | Q | 45,406 | 52,883 | 61,149 | 70,288 | 80,389 | 103,817 | 132,125 | 166,002 |
| | | P | 6.40 | 6.76 | 7.10 | 7.41 | 7.69 | 8.12 | 8.35 | 8.34 |
| | 130 | Q | 34,509 | 40,767 | 47,651 | 55,246 | 63,640 | 83,167 | 106,922 | 135,596 |
| | | P | 6.65 | 7.14 | 7.62 | 8.08 | 8.51 | 9.29 | 9.90 | 10.31 |
| 06MA018 | 90 | Q | 69,397 | 79,557 | 90,724 | 102,987 | 116,432 | 147,216 | 183,774 | 226,801 |
| | | P | 6.98 | 7.24 | 7.46 | 7.64 | 7.77 | 7.85 | 7.68 | 7.20 |
| | 110 | Q | 56,121 | 64,955 | 74,640 | 85,264 | 96,913 | 123,637 | 155,509 | 193,224 |
| | | P | 7.64 | 8.06 | 8.45 | 8.80 | 9.12 | 9.61 | 9.87 | 9.85 |
| | 130 | Q | 43,271 | 50,833 | 59,090 | 68,129 | 78,038 | 100,810 | 128,104 | 160,617 |
| | | P | 7.98 | 8.57 | 9.13 | 9.66 | 10.17 | 11.06 | 11.75 | 12.21 |
| 06MA021 | 90 | Q | 83,797 | 95,654 | 108,613 | 122,767 | 138,207 | 173,311 | 214,656 | 262,973 |
| | | P | 8.27 | 8.57 | 8.82 | 9.02 | 9.17 | 9.27 | 9.07 | 8.54 |
| | 110 | Q | 68,518 | 78,993 | 90,415 | 102,873 | 116,461 | 147,388 | 183,928 | 226,811 |
| | | P | 9.09 | 9.58 | 10.04 | 10.45 | 10.81 | 11.37 | 11.66 | 11.65 |
| | 130 | Q | 53,301 | 62,402 | 72,292 | 83,063 | 94,805 | 121,571 | 153,322 | 190,787 |
| | | P | 9.53 | 10.23 | 10.89 | 11.52 | 12.11 | 13.14 | 13.94 | 14.46 |
| 06MA024 | 90 | Q | 98,395 | 111,980 | 126,768 | 142,854 | 160,334 | 199,863 | 246,123 | 299,881 |
| | | P | 9.59 | 9.93 | 10.22 | 10.45 | 10.61 | 10.72 | 10.5 | 9.91 |
| | 110 | Q | 81,069 | 93,212 | 106,399 | 120,726 | 136,289 | 171,507 | 212,822 | 261,003 |
| | | P | 10.58 | 11.15 | 11.67 | 12.14 | 12.55 | 13.18 | 13.50 | 13.49 |
| | 130 | Q | 63,445 | 74,106 | 85,654 | 98,183 | 111,790 | 142,621 | 178,915 | 221,441 |
| | | P | 11.13 | 11.94 | 12.71 | 13.43 | 14.10 | 15.28 | 16.18 | 16.77 |



## Technical Drawing




## Accessories

- Service valves
- Oil pressure safety switch
- Oil level regulator
- Compressor interconnection package
- Muffler
- Capacity control coil packages
- Crankcase heaters
- Factory installed motor protection
- Capacity control pulse width modulating valve (PWM)

## Carlyle 06M Compressors

Reliability, efficiency and versatility in one complete compressor family.

Learn more: **www.carlylecompressor.com**

Carlyle®
Performance you demand, quality you rely on.

Carlyle Compressor
PO Box 4808
Syracuse, NY 13221, USA