

Invotech Selection Software

REFRIGERANT R404A

Operation Conditions :

Evaporating Temperature (°C) : -10,0

Condensing Temperature (°C) : 45,0

Liquid subcooling: 0,0

Suction Superheat: 30,0

Required Capacity(Kw):

Compressor Selected: YM132E1G-100

PERFORMANCE AT SPECIFIED OPERATING POINT

| | |
|------------------|-------|
| Capacity (KW) | 13,61 |
| Power Input (KW) | 5,93 |
| COP | 2,3 |
| Current (A) | 10,9 |

COMPRESSOR MECHANICAL AND PHYSICAL DATA

| | |
|------------------------------------|--------------|
| Length/Width/Height (mm) | 260/244/508 |
| Weight (kg) | 53 |
| Stub Suction (inch) | 1 1/8 |
| Stub Discharge (inch) | 7/8 |
| Base mounting (hole dia) | 190X190(8.5) |
| Oil type | POE |
| Initial charge of oil quantity (L) | 2.7 |
| Recharge of oil quantity (L) | 2.6 |
| High Side PS Max., (MPa) | 3.2 |
| Low Side PS Max., (MPa) | 2.0 |
| Displacement(m ³ /h) | 21.4 |

COMPRESSOR ELECTRICAL DATA

| | |
|---------------------------------|------------------|
| Electricity | 380V/50Hz/3P |
| Standard Conditions | -6.7/48.9/11.1/0 |
| Normal Power (HP) | 8 |
| Normal Capacity (W) | 12893 |
| Normal Power input (W) | 6447 |
| Normal COP (W/W) | 2 |
| Normal Current (A) | 12.1 |
| Locked Rotor Current (A) | 117 |
| Maximum operating current (A) | 18.4 |

Model: YM132E1G-100

Refrigerant: R404A

Suction Superheat: 30,0

Liquid subcooling: 0,0

Capacity (KW)

| Tc \ Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 10 | 9,53 | 11,61 | 14,16 | 17,25 | 20,94 | | | | | |
| 15 | 8,92 | 10,91 | 13,35 | 16,28 | 19,77 | | | | | |
| 20 | 8,38 | 10,3 | 12,62 | 15,4 | 18,69 | 22,55 | | | | |
| 25 | 7,9 | 9,75 | 11,95 | 14,57 | 17,66 | 21,28 | 25,49 | | | |
| 30 | 7,46 | 9,22 | 11,31 | 13,77 | 16,66 | 20,04 | 23,97 | 28,51 | 33,71 | |
| 35 | 7,02 | 8,71 | 10,68 | 12,98 | 15,67 | 18,81 | 22,46 | 26,67 | 31,51 | |
| 40 | 6,56 | 8,18 | 10,03 | 12,17 | 14,66 | 17,56 | 20,93 | 24,82 | 29,3 | |
| 45 | | 7,6 | 9,34 | 11,32 | 13,61 | 16,27 | 19,36 | 22,92 | 27,04 | |
| 50 | | | 8,58 | 10,41 | 12,5 | 14,92 | 17,72 | 20,96 | 24,71 | |
| 55 | | | | 9,4 | 11,3 | 13,47 | 15,99 | 18,91 | 22,3 | |
| 60 | | | | | 9,98 | 11,92 | 14,15 | 16,75 | 19,77 | |
| 65 | | | | | | 10,22 | 12,18 | 14,45 | 17,1 | |

Power Input (KW)

| Tc \ Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---------|------|------|------|------|------|------|------|------|------|--|
| 10 | 2,72 | 2,84 | 2,99 | 3,15 | 3,34 | | | | | |
| 15 | 2,94 | 3,08 | 3,24 | 3,41 | 3,6 | | | | | |
| 20 | 3,19 | 3,34 | 3,51 | 3,7 | 3,89 | 4,09 | | | | |
| 25 | 3,46 | 3,63 | 3,82 | 4,01 | 4,22 | 4,42 | 4,63 | | | |
| 30 | 3,76 | 3,95 | 4,16 | 4,37 | 4,58 | 4,79 | 5,01 | 5,21 | 5,42 | |
| 35 | 4,09 | 4,31 | 4,53 | 4,76 | 4,98 | 5,21 | 5,42 | 5,63 | 5,83 | |
| 40 | 4,45 | 4,7 | 4,95 | 5,19 | 5,43 | 5,67 | 5,89 | 6,11 | 6,31 | |
| 45 | | 5,13 | 5,4 | 5,67 | 5,93 | 6,18 | 6,41 | 6,63 | 6,84 | |
| 50 | | | 5,9 | 6,19 | 6,47 | 6,74 | 6,99 | 7,22 | 7,42 | |
| 55 | | | | 6,76 | 7,07 | 7,35 | 7,62 | 7,86 | 8,08 | |
| 60 | | | | | 7,72 | 8,03 | 8,31 | 8,57 | 8,79 | |
| 65 | | | | | | 8,76 | 9,06 | 9,34 | 9,58 | |

Model: YM132E1G-100

Refrigerant: R404A

Suction Superheat: 30,0

Liquid subcooling: 0,0

Current (A)

| Tc \ Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---------|------|------|-------|-------|-------|-------|-------|-------|-------|--|
| 10 | 7,09 | 7,2 | 7,34 | 7,52 | 7,73 | | | | | |
| 15 | 7,3 | 7,43 | 7,6 | 7,79 | 8,01 | | | | | |
| 20 | 7,54 | 7,7 | 7,89 | 8,1 | 8,33 | 8,58 | | | | |
| 25 | 7,83 | 8,02 | 8,23 | 8,46 | 8,71 | 8,97 | 9,23 | | | |
| 30 | 8,15 | 8,38 | 8,62 | 8,88 | 9,15 | 9,42 | 9,7 | 9,98 | 10,25 | |
| 35 | 8,53 | 8,8 | 9,07 | 9,36 | 9,65 | 9,95 | 10,24 | 10,53 | 10,81 | |
| 40 | 8,96 | 9,28 | 9,59 | 9,91 | 10,23 | 10,55 | 10,86 | 11,17 | 11,45 | |
| 45 | | 9,82 | 10,19 | 10,54 | 10,9 | 11,24 | 11,58 | 11,9 | 12,2 | |
| 50 | | | 10,86 | 11,26 | 11,65 | 12,03 | 12,39 | 12,73 | 13,04 | |
| 55 | | | | 12,06 | 12,49 | 12,91 | 13,3 | 13,66 | 14 | |
| 60 | | | | | 13,44 | 13,89 | 14,32 | 14,71 | 15,08 | |
| 65 | | | | | | 14,99 | 15,45 | 15,88 | 16,28 | |

Mass Flow (Kg/h)

| Tc \ Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| 10 | 187,86 | 234,82 | 289,34 | 353,84 | 430,76 | | | | | |
| 15 | 184,25 | 230,6 | 284,46 | 348,24 | 424,39 | | | | | |
| 20 | 181,6 | 227,43 | 280,71 | 343,86 | 419,31 | 509,48 | | | | |
| 25 | 179,62 | 225,02 | 277,8 | 340,39 | 415,23 | 504,74 | 611,35 | | | |
| 30 | 178,01 | 223,06 | 275,43 | 337,55 | 411,87 | 500,8 | 606,77 | 732,21 | 879,56 | |
| 35 | 176,49 | 221,26 | 273,31 | 335,05 | 408,92 | 497,35 | 602,77 | 727,6 | 874,28 | |
| 40 | 174,76 | 219,35 | 271,15 | 332,59 | 406,11 | 494,12 | 599,07 | 723,38 | 869,47 | |
| 45 | | 217,01 | 268,66 | 329,88 | 403,13 | 490,82 | 595,37 | 719,24 | 864,83 | |
| 50 | | | 265,54 | 326,64 | 399,69 | 487,13 | 591,39 | 714,89 | 860,07 | |
| 55 | | | | 322,55 | 395,5 | 482,79 | 586,83 | 710,05 | 854,9 | |
| 60 | | | | | 390,28 | 477,48 | 581,39 | 704,42 | 849,02 | |
| 65 | | | | | | 470,93 | 574,79 | 697,71 | 842,15 | |