

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: YM102E1G-100

PERFORMANCE AT SPECIFIED OPERATING POINT

| | |
|------------------|-------|
| Capacity (KW) | 10,52 |
| Power Input (KW) | 4,62 |
| COP | 2,28 |
| Current (A) | 8,49 |

COMPRESSOR MECHANICAL AND PHYSICAL DATA

| | |
|------------------------------------|--------------|
| Length/Width/Height (mm) | 239/239/463 |
| Weight (kg) | 33 |
| Stub Suction (inch) | 7/8 |
| Stub Discharge (inch) | 1/2 |
| Base mounting (hole dia) | 190X190(8.5) |
| Oil type | POE |
| Initial charge of oil quantity (L) | 1.6 |
| Recharge of oil quantity (L) | 1.45 |
| High Side PS Max., (MPa) | 3.2 |
| Low Side PS Max., (MPa) | 2.0 |
| Displacement(m ³ /h) | 17.1 |

COMPRESSOR ELECTRICAL DATA

| | |
|---------------------------------|------------------|
| Electricity | 380V/50Hz/3P |
| Standard Conditions | -6.7/48.9/11.1/0 |
| Normal Power (HP) | 6 |
| Normal Capacity (W) | 10100 |
| Normal Power input (W) | 5050 |
| Normal COP (W/W) | 2 |
| Normal Current (A) | 9.4 |
| Locked Rotor Current (A) | 65 |
| Maximum operating current (A) | 14.3 |

Model: YM102E1G-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 | 7,37 | 8,97 | 10,94 | 13,33 | 16,18 | | | | | |
| 15 | 6,89 | 8,43 | 10,32 | 12,58 | 15,28 | | | | | |
| 20 | 6,48 | 7,96 | 9,75 | 11,9 | 14,44 | 17,42 | | | | |
| 25 | 6,11 | 7,53 | 9,23 | 11,26 | 13,64 | 16,44 | 19,7 | | | |
| 30 | 5,76 | 7,13 | 8,74 | 10,64 | 12,87 | 15,49 | 18,52 | 22,03 | 26,05 | |
| 35 | 5,42 | 6,73 | 8,25 | 10,03 | 12,11 | 14,53 | 17,35 | 20,61 | 24,35 | |
| 40 | 5,07 | 6,32 | 7,75 | 9,4 | 11,33 | 13,57 | 16,17 | 19,18 | 22,64 | |
| 45 | | 5,88 | 7,22 | 8,75 | 10,52 | 12,57 | 14,96 | 17,71 | 20,89 | |
| 50 | | | 6,63 | 8,04 | 9,66 | 11,53 | 13,69 | 16,2 | 19,1 | |
| 55 | | | | 7,27 | 8,73 | 10,41 | 12,36 | 14,62 | 17,23 | |
| 60 | | | | | 7,71 | 9,21 | 10,94 | 12,94 | 15,28 | |
| 65 | | | | | | 7,9 | 9,41 | 11,17 | 13,21 | |

Power Input (KW)

| Tc \ Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---------|------|------|------|------|------|------|------|------|------|--|
| 10 | 2,12 | 2,21 | 2,33 | 2,46 | 2,6 | | | | | |
| 15 | 2,29 | 2,4 | 2,52 | 2,66 | 2,81 | | | | | |
| 20 | 2,49 | 2,61 | 2,74 | 2,88 | 3,03 | 3,19 | | | | |
| 25 | 2,7 | 2,83 | 2,98 | 3,13 | 3,29 | 3,45 | 3,61 | | | |
| 30 | 2,93 | 3,08 | 3,24 | 3,4 | 3,57 | 3,74 | 3,9 | 4,06 | 4,22 | |
| 35 | 3,19 | 3,36 | 3,53 | 3,71 | 3,88 | 4,06 | 4,23 | 4,39 | 4,55 | |
| 40 | 3,47 | 3,66 | 3,85 | 4,05 | 4,23 | 4,42 | 4,59 | 4,76 | 4,92 | |
| 45 | | 4 | 4,21 | 4,42 | 4,62 | 4,81 | 5 | 5,17 | 5,33 | |
| 50 | | | 4,6 | 4,83 | 5,04 | 5,25 | 5,45 | 5,62 | 5,79 | |
| 55 | | | | 5,27 | 5,51 | 5,73 | 5,94 | 6,13 | 6,29 | |
| 60 | | | | | 6,02 | 6,26 | 6,48 | 6,68 | 6,85 | |
| 65 | | | | | | 6,83 | 7,07 | 7,28 | 7,47 | |

Model: YM102E1G-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 | 5,53 | 5,61 | 5,72 | 5,86 | 6,03 | | | | | |
| 15 | 5,69 | 5,79 | 5,92 | 6,07 | 6,24 | | | | | |
| 20 | 5,88 | 6 | 6,15 | 6,31 | 6,49 | 6,68 | | | | |
| 25 | 6,1 | 6,25 | 6,41 | 6,59 | 6,79 | 6,99 | 7,2 | | | |
| 30 | 6,35 | 6,53 | 6,72 | 6,92 | 7,13 | 7,34 | 7,56 | 7,78 | 7,99 | |
| 35 | 6,65 | 6,86 | 7,07 | 7,3 | 7,52 | 7,75 | 7,98 | 8,21 | 8,42 | |
| 40 | 6,99 | 7,23 | 7,48 | 7,73 | 7,98 | 8,23 | 8,47 | 8,7 | 8,93 | |
| 45 | | 7,66 | 7,94 | 8,22 | 8,49 | 8,76 | 9,02 | 9,27 | 9,51 | |
| 50 | | | 8,46 | 8,77 | 9,08 | 9,37 | 9,65 | 9,92 | 10,17 | |
| 55 | | | | 9,4 | 9,74 | 10,06 | 10,37 | 10,65 | 10,91 | |
| 60 | | | | | 10,48 | 10,83 | 11,16 | 11,47 | 11,75 | |
| 65 | | | | | | 11,68 | 12,05 | 12,38 | 12,69 | |

Mass Flow (Kg/h)

| Tc \ Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| 10 | 145,16 | 181,45 | 223,58 | 273,42 | 332,86 | | | | | |
| 15 | 142,37 | 178,19 | 219,81 | 269,1 | 327,93 | | | | | |
| 20 | 140,33 | 175,74 | 216,91 | 265,71 | 324,01 | 393,69 | | | | |
| 25 | 138,8 | 173,88 | 214,66 | 263,03 | 320,86 | 390,03 | 472,41 | | | |
| 30 | 137,56 | 172,36 | 212,83 | 260,84 | 318,26 | 386,98 | 468,87 | 565,8 | 679,66 | |
| 35 | 136,38 | 170,98 | 211,19 | 258,9 | 315,99 | 384,32 | 465,78 | 562,24 | 675,58 | |
| 40 | 135,04 | 169,5 | 209,52 | 257 | 313,81 | 381,82 | 462,92 | 558,97 | 671,86 | |
| 45 | | 167,69 | 207,6 | 254,91 | 311,51 | 379,27 | 460,06 | 555,77 | 668,28 | |
| 50 | | | 205,19 | 252,4 | 308,85 | 376,42 | 456,98 | 552,42 | 664,6 | |
| 55 | | | | 249,25 | 305,62 | 373,06 | 453,46 | 548,68 | 660,6 | |
| 60 | | | | | 301,58 | 368,96 | 449,25 | 544,33 | 656,06 | |
| 65 | | | | | | 363,9 | 444,15 | 539,14 | 650,75 | |