# Invotech Selection Software

| | |
|---|---|
| REFRIGERANT | R404A |

## Operation Conditions:

| | |
|---|---|
| Evaporating Temperature(℃): | -8,0 |
| Condensing Temperature(℃): | 45,0 |
| Liquid subcooling: | 0,0 |
| Suction Superheat: | 28,0 |

**Required Capacity(Kw):**

| | |
|---|---|
| Compressor Selected: | YM350E1G-100 |

| PERFORMANCE AT SPECIFIED OPERATING POINT | |
|---|---|
| Capacity (KW) | 34,05 |
| Power Input (KW) | 15,72 |
| COP | 2,17 |
| Current (A) | 29,6 |

| CPMPRESSOR MECHANICAL AND PHYSICAL DATA | |
|---|---|
| Length/Width/Height (mm) | 356.3/326.2/676.7 |
| Weight (kg) | 100 |
| Stub Suction (inch) | 1 5/8 |
| Stub Discharge (inch) | 1 1/4 |
| Base mounting (hole dia) | 232X232(11) |
| Oil type | POE |
| Initial charge of oil quantity (L) | 5.5 |
| Recharge of oil quantity (L) | 5.3 |
| High Side PS Max., (MPa) | 3.2 |
| Low Side PS Max., (MPa) | 2.0 |
| Displacement($m^3/h$) | 57.9 |

| COMPRESSOR ELECTRICAL DATA | |
|---|---|
| Electricity | 380V/50Hz/3P |
| Standard Conditions | -6.7/48.9/11.1/0 |
| Normal Power (HP) | 20 |
| Normal Capacity (W) | 33300 |
| Normal Power input(W) | 16650 |
| Normal COP(W/W) | 2 |
| Normal Current(A) | 29.4 |
| Locked Rotor Current(A) | 266 |
| Maximum operating current(A) | 41 |

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Model: YM350E1G-100 Refrigerant: R404A

Suction Superheat: 28,0 Liquid subcooling: 0,0

## Capacity(KW)

| Tc\Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 19,61 | 23,59 | 28,56 | 34,68 | 42,15 | | | | | |
| 15 | 19,23 | 23,33 | 28,34 | 34,43 | 41,81 | | | | | |
| 20 | 18,6 | 22,75 | 27,74 | 33,76 | 40,98 | 49,59 | | | | |
| 25 | 17,76 | 21,91 | 26,83 | 32,71 | 39,72 | 48,06 | 57,91 | | | |
| 30 | 16,78 | 20,87 | 25,66 | 31,34 | 38,09 | 46,1 | 55,55 | 66,61 | 79,48 | |
| 35 | 15,71 | 19,68 | 24,29 | 29,71 | 36,14 | 43,76 | 52,75 | 63,29 | 75,57 | |
| 40 | 14,61 | 18,4 | 22,77 | 27,88 | 33,93 | 41,1 | 49,58 | 59,54 | 71,17 | |
| 45 | 13,53 | 17,09 | 21,15 | 25,9 | 31,52 | 38,18 | 46,09 | 55,41 | 66,33 | |
| 50 | 12,54 | 15,8 | 19,51 | 23,83 | 28,95 | 35,06 | 42,33 | 50,96 | 61,12 | |
| 55 | 11,68 | 14,6 | 17,88 | 21,72 | 26,29 | 31,78 | 38,37 | 46,24 | 55,58 | |
| 60 | | | 16,34 | 19,64 | 23,6 | 28,41 | 34,26 | 41,32 | 49,78 | |
| 65 | | | | 17,63 | 20,93 | 25,01 | 30,05 | 36,25 | 43,77 | |

## Power Input(KW)

| Tc\Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 6,61 | 6,95 | 7,23 | 7,48 | 7,69 | | | | | |
| 15 | 7,53 | 7,97 | 8,35 | 8,69 | 9 | | | | | |
| 20 | 8,32 | 8,86 | 9,35 | 9,79 | 10,18 | 10,54 | | | | |
| 25 | 9,02 | 9,67 | 10,26 | 10,8 | 11,28 | 11,72 | 12,13 | | | |
| 30 | 9,66 | 10,42 | 11,11 | 11,75 | 12,32 | 12,85 | 13,34 | 13,78 | 14,2 | |
| 35 | 10,27 | 11,13 | 11,93 | 12,66 | 13,34 | 13,95 | 14,52 | 15,05 | 15,53 | |
| 40 | 10,87 | 11,85 | 12,75 | 13,58 | 14,35 | 15,06 | 15,71 | 16,32 | 16,88 | |
| 45 | 11,5 | 12,59 | 13,6 | 14,53 | 15,39 | 16,19 | 16,93 | 17,62 | 18,25 | |
| 50 | 12,19 | 13,39 | 14,5 | 15,53 | 16,49 | 17,38 | 18,21 | 18,98 | 19,69 | |
| 55 | 12,96 | 14,27 | 15,49 | 16,63 | 17,69 | 18,67 | 19,58 | 20,43 | 21,22 | |
| 60 | | | 16,6 | 17,84 | 19 | 20,07 | 21,08 | 22,01 | 22,88 | |
| 65 | | | | 19,2 | 20,46 | 21,63 | 22,72 | 23,74 | 24,69 | |

Model: YM350E1G-100 Refrigerant: R404A

Suction Superheat: 28,0 Liquid subcoolling: 0,0

## Current(A)

| Tc\Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 18,04 | 17,93 | 18 | 18,33 | 19 | | | | | |
| 15 | 19,07 | 18,93 | 18,91 | 19,11 | 19,6 | | | | | |
| 20 | 20,26 | 20,12 | 20,05 | 20,15 | 20,48 | 21,13 | | | | |
| 25 | 21,63 | 21,51 | 21,43 | 21,46 | 21,67 | 22,15 | 22,97 | | | |
| 30 | 23,17 | 23,11 | 23,05 | 23,04 | 23,17 | 23,51 | 24,14 | 25,14 | 26,58 | |
| 35 | 24,89 | 24,94 | 24,91 | 24,9 | 24,97 | 25,21 | 25,69 | 26,48 | 27,67 | |
| 40 | 26,81 | 26,98 | 27,04 | 27,05 | 27,1 | 27,27 | 27,62 | 28,24 | 29,21 | |
| 45 | 28,94 | 29,27 | 29,43 | 29,5 | 29,57 | 29,69 | 29,95 | 30,44 | 31,21 | |
| 50 | 31,27 | 31,79 | 32,1 | 32,26 | 32,36 | 32,48 | 32,69 | 33,06 | 33,68 | |
| 55 | 33,81 | 34,56 | 35,04 | 35,33 | 35,51 | 35,65 | 35,83 | 36,13 | 36,62 | |
| 60 | | | 38,28 | 38,72 | 39,01 | 39,2 | 39,39 | 39,64 | 40,04 | |
| 65 | | | | 42,44 | 42,86 | 43,15 | 43,37 | 43,62 | 43,95 | |

## Mass Flow(Kg/h)

| Tc\Te | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 446,3 | 564,06 | 696,74 | 849,88 | 1028,99 | | | | | |
| 15 | 449,98 | 564,95 | 695,46 | 847,03 | 1025,19 | | | | | |
| 20 | 450,2 | 562,32 | 690,59 | 840,54 | 1017,68 | 1227,56 | | | | |
| 25 | 447,7 | 556,9 | 682,87 | 831,13 | 1007,21 | 1216,62 | 1464,9 | | | |
| 30 | 443,2 | 549,43 | 673,04 | 819,55 | 994,49 | 1203,39 | 1451,76 | 1745,13 | 2089,02 | |
| 35 | 437,44 | 540,64 | 661,83 | 806,53 | 980,28 | 1188,59 | 1436,99 | 1731 | 2076,15 | |
| 40 | 431,16 | 531,26 | 649,97 | 792,81 | 965,29 | 1172,96 | 1421,32 | 1715,92 | 2062,26 | |
| 45 | 425,09 | 522,04 | 638,2 | 779,11 | 950,28 | 1157,23 | 1405,51 | 1700,62 | 2048,09 | |
| 50 | 419,96 | 513,69 | 627,25 | 766,17 | 935,96 | 1142,15 | 1390,27 | 1685,84 | 2034,38 | |
| 55 | 416,52 | 506,97 | 617,87 | 754,73 | 923,08 | 1128,44 | 1376,34 | 1672,31 | 2021,86 | |
| 60 | | | 610,77 | 745,52 | 912,36 | 1116,84 | 1364,47 | 1660,77 | 2011,27 | |
| 65 | | | | 739,27 | 904,55 | 1108,08 | 1355,37 | 1651,95 | 2003,34 | |