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# Invotech Selection Software

| | |
|---|---|
| REFRIGERANT | R410A |

## Operation Conditions

| | |
|---|---|
| Evaporating Temperature(℃): | 7.2 |
| Condensing Temperature(℃): | 54.4 |
| Liquid subcooling: | 8.3 |
| Suction Superheat: | 11.1 |

**Required Capacity(Kw):**

| | |
|---|---|
| Compressor Selected: | YH400C1-105 |

| PERFORMANCE AT SPECIFIED OPERATING POINT | |
|---|---|
| Capacity (KW) | 38.47 |
| Power Input (KW) | 12.19 |
| COP | 3.15 |
| Current (A) | 23.66 |

| CPMPRESSOR MECHANICAL AND PHYSICAL DATA | |
|---|---|
| Length/Width/Height (mm) | 248/272/556.7 |
| Weight (kg) | 59 |
| Stub Suction (inch) | 1 1/8 |
| Stub Discharge (inch) | 7/8 |
| Base mounting (hole dia) | 190.5X190.5(8.5) |
| Oil type | POE |
| Initial charge of oil quantity (L) | 3.7 |
| Recharge of oil quantity (L) | 3.5 |
| High Side PS Max., (MPa) | 4.3 |
| Low Side PS Max., (MPa) | 2.0 |
| Displacement($m^3/h$) | 25.3 |

| COMPRESSOR ELECTRICAL DATA | |
|---|---|
| Electricity | 380V/50Hz/3P |
| Standard Conditions | 7.2/54.4/11.1/8.3 |
| Normal Power (HP) | 13 |
| Normal Capacity (□) | 39250 |
| Normal Power input(□) | 12258 |
| Normal COP(□/□) | 3.2 |
| Normal Current(□) | 21.5 |
| Locked Rotor Current(□) | 148.5 |
| Maximum operating current(□) | 32.5 |

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Model: YH400C1-105 Refrigerant: R410A

Suction Superheat: 11.1 Liquid subcooling: 8.3

## Capacity(KW)

| Tc\Te | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 12.5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 16.52 | 20.66 | 25.43 | 30.93 | 37.24 | 44.46 | 52.69 | | | |
| 30 | 15.27 | 19.15 | 23.63 | 28.8 | 34.74 | 41.55 | 49.33 | | | |
| 35 | 14.34 | 17.98 | 22.17 | 27.01 | 32.59 | 39 | 46.34 | 54.7 | 59.29 | |
| 40 | 13.6 | 17 | 20.91 | 25.43 | 30.66 | 36.67 | 43.58 | 51.47 | 55.8 | |
| 45 | | 16.08 | 19.72 | 23.93 | 28.81 | 34.44 | 40.91 | 48.33 | 52.43 | |
| 50 | | | 18.47 | 22.37 | 26.9 | 32.15 | 38.21 | 45.17 | 49.02 | |
| 55 | | | | 20.62 | 24.82 | 29.69 | 35.33 | 41.84 | 45.45 | |
| 60 | | | | | 22.41 | 26.92 | 32.15 | 38.22 | 41.58 | |
| 65 | | | | | | 23.7 | 28.54 | 34.16 | 37.29 | |

## Power Input(KW)

| Tc\Te | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 12.5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 6 | 6.14 | 6.35 | 6.6 | 6.89 | 7.21 | 7.53 | | | |
| 30 | 6.87 | 6.96 | 7.1 | 7.27 | 7.47 | 7.67 | 7.88 | | | |
| 35 | 7.75 | 7.81 | 7.91 | 8.03 | 8.16 | 8.3 | 8.41 | 8.5 | 8.53 | |
| 40 | 8.64 | 8.7 | 8.79 | 8.89 | 8.99 | 9.07 | 9.12 | 9.14 | 9.12 | |
| 45 | | 9.64 | 9.74 | 9.85 | 9.94 | 10 | 10.02 | 9.99 | 9.95 | |
| 50 | | | 10.76 | 10.9 | 11.02 | 11.08 | 11.1 | 11.05 | 10.99 | |
| 55 | | | | 12.06 | 12.22 | 12.32 | 12.36 | 12.32 | 12.27 | |
| 60 | | | | | 13.54 | 13.72 | 13.81 | 13.81 | 13.77 | |
| 65 | | | | | | 15.26 | 15.44 | 15.51 | 15.5 | |

Model: YH400C1-105 Refrigerant: R410A

Suction Superheat: 11.1 Liquid subcoolling: 8.3

## Current(A)

| Tc\Te | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 12.5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 15.58 | 15.6 | 15.54 | 15.45 | 15.41 | 15.46 | 15.69 | | | |
| 30 | 16.55 | 16.48 | 16.3 | 16.06 | 15.84 | 15.69 | 15.68 | | | |
| 35 | 17.87 | 17.79 | 17.55 | 17.24 | 16.91 | 16.62 | 16.44 | 16.44 | 16.53 | |
| 40 | 19.39 | 19.36 | 19.14 | 18.82 | 18.45 | 18.09 | 17.82 | 17.69 | 17.7 | |
| 45 | | 21.03 | 20.91 | 20.64 | 20.3 | 19.94 | 19.64 | 19.46 | 19.43 | |
| 50 | | | 22.68 | 22.54 | 22.3 | 22.01 | 21.75 | 21.58 | 21.54 | |
| 55 | | | | 24.36 | 24.29 | 24.14 | 23.99 | 23.89 | 23.89 | |
| 60 | | | | | 26.1 | 26.16 | 26.19 | 26.24 | 26.3 | |
| 65 | | | | | | 27.91 | 28.19 | 28.46 | 28.62 | |

## Mass Flow(Kg/h)

| Tc\Te | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 12.5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 286.72 | 369.87 | 453.24 | 542.8 | 644.58 | 764.55 | 908.73 | | | |
| 30 | 269.78 | 354.11 | 437.18 | 525.01 | 623.6 | 738.93 | 877.02 | | | |
| 35 | 259.52 | 346.6 | 430.98 | 518.67 | 615.66 | 727.96 | 861.55 | 1022.45 | 1115.02 | |
| 40 | 250.5 | 341.94 | 429.23 | 518.37 | 615.37 | 726.21 | 856.91 | 1013.46 | 1103.31 | |
| 45 | | 334.73 | 426.52 | 518.71 | 617.3 | 728.29 | 857.69 | 1011.48 | 1099.41 | |
| 50 | | | 417.43 | 514.26 | 616.05 | 728.78 | 858.47 | 1011.11 | 1097.91 | |
| 55 | | | | 499.63 | 606.2 | 722.28 | 853.85 | 1006.92 | 1093.4 | |
| 60 | | | | | 582.35 | 703.36 | 838.41 | 993.52 | 1080.46 | |
| 65 | | | | | | 666.62 | 806.75 | 965.49 | 1053.7 | |