

Invotech Selection Software

REFRIGERANT R410A

Operation Conditions

Evaporating Temperature(ℓ): 7,2
 Condensing Temperature(ℓ): 54,4
 Liquid subcooling: 8,3
 Suction Superheat: 11,1

Required Capacity(Kw): 0,01

Compressor Selected: YH450C1-105

PERFORMANCE AT SPECIFIED OPERATING POINT

| | |
|------------------|-------|
| Capacity (KW) | 44,31 |
| Power Input (KW) | 13,79 |
| COP | 3,21 |
| Current (A) | 26,32 |

COMPRESSOR 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) | 29.1 |

COMPRESSOR ELECTRICAL DATA

| | |
|------------------------------|-------------------|
| Electricity | 380V/50Hz/3P |
| Standard Conditions | 7.2/54.4/11.1/8.3 |
| Normal Power (HP) | 15 |
| Normal Capacity (ℓ) | 45044 |
| Normal Power input(ℓ) | 13759 |
| Normal COP(ℓ/ℓ) | 3.27 |
| Normal Current(ℓ) | 24.1 |
| Locked Rotor Current(ℓ) | 148.5 |
| Maximum operating current(ℓ) | 36 |

Model: YH450C1-105

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 | 19,21 | 23,12 | 28 | 33,91 | 40,95 | 49,2 | 58,74 | | | |
| 30 | 17,91 | 21,7 | 26,38 | 32,03 | 38,73 | 46,57 | 55,64 | | | |
| 35 | 16,8 | 20,48 | 24,97 | 30,36 | 36,72 | 44,16 | 52,74 | 62,56 | 67,96 | |
| 40 | 15,77 | 19,33 | 23,63 | 28,75 | 34,79 | 41,82 | 49,92 | 59,19 | 64,29 | |
| 45 | | 18,11 | 22,23 | 27,09 | 32,79 | 39,42 | 47,05 | 55,77 | 60,57 | |
| 50 | | | 20,63 | 25,24 | 30,61 | 36,84 | 43,99 | 52,17 | 56,67 | |
| 55 | | | | 23,07 | 28,11 | 33,94 | 40,62 | 48,25 | 52,45 | |
| 60 | | | | | 25,16 | 30,59 | 36,8 | 43,89 | 47,79 | |
| 65 | | | | | | 26,66 | 32,4 | 38,95 | 42,56 | |

Power Input(KW)

| Tc\Te | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 12,5 | |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 25 | 7,09 | 7,22 | 7,39 | 7,58 | 7,79 | 8,02 | 8,26 | | | |
| 30 | 7,89 | 7,97 | 8,08 | 8,2 | 8,35 | 8,5 | 8,65 | | | |
| 35 | 8,76 | 8,82 | 8,89 | 8,98 | 9,07 | 9,17 | 9,26 | 9,34 | 9,37 | |
| 40 | 9,73 | 9,78 | 9,84 | 9,91 | 9,98 | 10,04 | 10,09 | 10,12 | 10,13 | |
| 45 | | 10,86 | 10,93 | 11 | 11,07 | 11,12 | 11,15 | 11,15 | 11,14 | |
| 50 | | | 12,16 | 12,26 | 12,34 | 12,4 | 12,44 | 12,44 | 12,43 | |
| 55 | | | | 13,69 | 13,81 | 13,91 | 13,97 | 13,99 | 13,98 | |
| 60 | | | | | 15,48 | 15,63 | 15,74 | 15,81 | 15,82 | |
| 65 | | | | | | 17,59 | 17,77 | 17,9 | 17,94 | |

Model: YH450C1-105

Refrigerant: R410A

Suction Superheat: 11,1

Liquid subcooling: 8,3

Current(A)

| Tc\Te | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 12,5 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 25 | 17,33 | 17,36 | 17,29 | 17,19 | 17,14 | 17,2 | 17,46 | | |
| 30 | 18,41 | 18,34 | 18,13 | 17,87 | 17,62 | 17,46 | 17,45 | | |
| 35 | 19,88 | 19,79 | 19,53 | 19,18 | 18,81 | 18,49 | 18,29 | 18,29 | 18,39 |
| 40 | 21,58 | 21,54 | 21,3 | 20,94 | 20,52 | 20,13 | 19,82 | 19,68 | 19,69 |
| 45 | | 23,4 | 23,26 | 22,96 | 22,58 | 22,19 | 21,85 | 21,64 | 21,61 |
| 50 | | | 25,23 | 25,08 | 24,81 | 24,49 | 24,2 | 24 | 23,97 |
| 55 | | | | 27,1 | 27,02 | 26,85 | 26,69 | 26,58 | 26,57 |
| 60 | | | | | 29,03 | 29,1 | 29,13 | 29,19 | 29,26 |
| 65 | | | | | | 31,05 | 31,36 | 31,66 | 31,84 |

Mass Flow(Kg/h)

| Tc\Te | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 12,5 |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 25 | 318,97 | 411,49 | 504,23 | 603,87 | 717,09 | 850,56 | 1010,96 | | |
| 30 | 300,13 | 393,94 | 486,36 | 584,08 | 693,75 | 822,06 | 975,69 | | |
| 35 | 288,71 | 385,59 | 479,47 | 577,02 | 684,93 | 809,85 | 958,48 | 1137,48 | 1240,46 |
| 40 | 278,69 | 380,41 | 477,52 | 576,69 | 684,6 | 807,91 | 953,32 | 1127,48 | 1227,43 |
| 45 | | 372,38 | 474,5 | 577,06 | 686,75 | 810,23 | 954,18 | 1125,28 | 1223,09 |
| 50 | | | 464,39 | 572,12 | 685,35 | 810,77 | 955,05 | 1124,86 | 1221,42 |
| 55 | | | | 555,83 | 674,4 | 803,53 | 949,91 | 1120,2 | 1216,4 |
| 60 | | | | | 647,86 | 782,49 | 932,74 | 1105,29 | 1202,02 |
| 65 | | | | | | 741,61 | 897,51 | 1074,1 | 1172,24 |