

Invotech Selection Software

REFRIGERANT R134a

Operation Conditions :

Evaporating Temperature (°C) : 5,0
 Condensing Temperature (°C) : 50,0
 Liquid subcooling: 0,0
 Suction Superheat: 10,0

Required Capacity(Kw):

Compressor Selected: YW80J2-100

PERFORMANCE AT SPECIFIED OPERATING POINT

| | |
|------------------|-------|
| Capacity (KW) | 9,24 |
| Power Input (KW) | 2,3 |
| COP | 4,02 |
| Current (A) | 10,98 |

COMPRESSOR MECHANICAL AND PHYSICAL DATA

| | |
|------------------------------------|--------------|
| Length/Width/Height (mm) | 239/239/418 |
| Weight (kg) | 31 |
| 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) | 1.4 |
| Recharge of oil quantity (L) | 1.25 |
| High Side PS Max., (MPa) | 3.0 |
| Low Side PS Max., (MPa) | 2.0 |
| Displacement(m ³ /h) | 11.8 |

COMPRESSOR ELECTRICAL DATA

| | |
|---------------------------------|---------------|
| Electricity | 220V/50Hz/1P |
| Standard Conditions | 5/55/11.1/8.3 |
| Normal Power (HP) | 4 |
| Normal Capacity (W) | 10450 |
| Normal Power input (W) | 2450 |
| Normal COP (W/W) | 4.27 |
| Normal Current (A) | 11.6 |
| Locked Rotor Current (A) | 109 |
| Maximum operating current (A) | 23.2 |

Model: YW80J2-100

Refrigerant: R134a

Suction Superheat: 10,0

Liquid subcooling: 0,0

Capacity (KW)

| Tc \ Te | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 20 | 25 | |
|---------|------|------|------|------|-------|-------|-------|-------|-------|--|
| 30 | 4,99 | 5,97 | 7,23 | 8,82 | 10,77 | 13,08 | | | | |
| 35 | 5 | 5,9 | 7,07 | 8,54 | 10,33 | 12,48 | 15,01 | | | |
| 40 | 4,99 | 5,82 | 6,91 | 8,27 | 9,94 | 11,93 | 14,27 | 17 | 20,14 | |
| 45 | 4,96 | 5,76 | 6,77 | 8,03 | 9,57 | 11,41 | 13,59 | 16,11 | 19,02 | |
| 50 | 4,93 | 5,69 | 6,63 | 7,81 | 9,24 | 10,94 | 12,95 | 15,3 | 18 | |
| 55 | 4,89 | 5,62 | 6,51 | 7,62 | 8,95 | 10,53 | 12,39 | 14,55 | 17,06 | |
| 60 | 4,84 | 5,56 | 6,42 | 7,45 | 8,69 | 10,15 | 11,88 | 13,88 | 16,2 | |
| 65 | 4,8 | 5,5 | 6,34 | 7,32 | 8,48 | 9,85 | 11,44 | 13,3 | 15,44 | |
| 70 | 4,73 | 5,46 | 6,28 | 7,22 | 8,32 | 9,59 | 11,08 | 12,79 | 14,76 | |
| 75 | 4,68 | 5,43 | 6,25 | 7,16 | 8,2 | 9,4 | 10,78 | 12,36 | 14,18 | |
| 80 | | | 6,24 | 7,14 | 8,14 | 9,27 | 10,55 | 12,03 | 13,71 | |
| 85 | | | | | 8,14 | 9,21 | 10,41 | 11,77 | 13,32 | |

Power Input (KW)

| Tc \ Te | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 20 | 25 | |
|---------|------|------|------|------|------|------|------|------|------|--|
| 30 | 1,44 | 1,53 | 1,59 | 1,63 | 1,65 | 1,63 | | | | |
| 35 | 1,55 | 1,65 | 1,73 | 1,8 | 1,84 | 1,86 | 1,85 | | | |
| 40 | 1,65 | 1,75 | 1,85 | 1,94 | 2,01 | 2,06 | 2,08 | 2,08 | 2,05 | |
| 45 | 1,74 | 1,86 | 1,97 | 2,07 | 2,16 | 2,23 | 2,29 | 2,32 | 2,32 | |
| 50 | 1,85 | 1,97 | 2,08 | 2,19 | 2,3 | 2,39 | 2,47 | 2,54 | 2,58 | |
| 55 | 1,99 | 2,1 | 2,21 | 2,33 | 2,45 | 2,56 | 2,66 | 2,75 | 2,82 | |
| 60 | 2,16 | 2,26 | 2,37 | 2,49 | 2,61 | 2,73 | 2,85 | 2,96 | 3,06 | |
| 65 | 2,38 | 2,46 | 2,57 | 2,68 | 2,81 | 2,94 | 3,07 | 3,2 | 3,32 | |
| 70 | 2,65 | 2,72 | 2,82 | 2,92 | 3,05 | 3,18 | 3,32 | 3,46 | 3,6 | |
| 75 | 3 | 3,05 | 3,13 | 3,22 | 3,34 | 3,47 | 3,61 | 3,76 | 3,91 | |
| 80 | | | 3,51 | 3,59 | 3,7 | 3,82 | 3,96 | 4,12 | 4,28 | |
| 85 | | | | | 4,14 | 4,25 | 4,38 | 4,53 | 4,7 | |

Model: YW80J2-100

Refrigerant: R134a

Suction Superheat: 10,0

Liquid subcooling: 0,0

Current (A)

| T _c \ T _e | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 20 | 25 | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 30 | 6,77 | 7,21 | 7,52 | 7,68 | 7,65 | 7,42 | | | | |
| 35 | 7,23 | 7,78 | 8,22 | 8,53 | 8,7 | 8,68 | 8,47 | | | |
| 40 | 7,63 | 8,24 | 8,79 | 9,23 | 9,56 | 9,73 | 9,74 | 9,55 | 9,14 | |
| 45 | 8,03 | 8,68 | 9,3 | 9,84 | 10,3 | 10,63 | 10,83 | 10,86 | 10,7 | |
| 50 | 8,49 | 9,16 | 9,81 | 10,43 | 10,98 | 11,45 | 11,81 | 12,03 | 12,09 | |
| 55 | 9,09 | 9,74 | 10,4 | 11,06 | 11,68 | 12,25 | 12,73 | 13,12 | 13,37 | |
| 60 | 9,89 | 10,48 | 11,13 | 11,79 | 12,46 | 13,1 | 13,68 | 14,19 | 14,6 | |
| 65 | 10,95 | 11,47 | 12,06 | 12,71 | 13,38 | 14,06 | 14,71 | 15,32 | 15,86 | |
| 70 | 12,34 | 12,75 | 13,26 | 13,86 | 14,51 | 15,2 | 15,89 | 16,57 | 17,21 | |
| 75 | 14,13 | 14,4 | 14,8 | 15,32 | 15,92 | 16,59 | 17,29 | 18,01 | 18,72 | |
| 80 | | | 16,74 | 17,15 | 17,67 | 18,29 | 18,97 | 19,7 | 20,45 | |
| 85 | | | | | 19,83 | 20,36 | 21 | 21,71 | 22,47 | |

Mass Flow (Kg/h)

| T _c \ T _e | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 20 | 25 | |
|---------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| 30 | 82,49 | 102,26 | 124,3 | 149,32 | 178,03 | 211,13 | | | | |
| 35 | 82,18 | 102,2 | 124,5 | 149,78 | 178,74 | 212,1 | 250,56 | | | |
| 40 | 81,32 | 101,5 | 123,96 | 149,39 | 178,51 | 212,03 | 250,64 | 295,06 | 345,99 | |
| 45 | 80,11 | 100,35 | 122,86 | 148,35 | 177,52 | 211,09 | 249,76 | 294,23 | 345,22 | |
| 50 | 78,74 | 98,93 | 121,39 | 146,83 | 175,96 | 209,48 | 248,1 | 292,52 | 343,46 | |
| 55 | 77,37 | 97,41 | 119,73 | 145,02 | 174 | 207,37 | 245,84 | 290,12 | 340,91 | |
| 60 | 76,2 | 96 | 118,06 | 143,1 | 171,83 | 204,95 | 243,17 | 287,2 | 337,74 | |
| 65 | 75,41 | 94,86 | 116,57 | 141,26 | 169,64 | 202,41 | 240,28 | 283,95 | 334,13 | |
| 70 | 75,19 | 94,18 | 115,44 | 139,68 | 167,6 | 199,92 | 237,33 | 280,55 | 330,28 | |
| 75 | 75,7 | 94,14 | 114,85 | 138,53 | 165,9 | 197,67 | 234,53 | 277,19 | 326,37 | |
| 80 | | | 114,98 | 138,01 | 164,73 | 195,84 | 232,04 | 274,05 | 322,57 | |
| 85 | | | | | 164,26 | 194,61 | 230,06 | 271,31 | 319,07 | |