

This information was generated by the HP KEYMARK database on 18 Mar 2022

[Login](#)

| | | | |
|---------------------|----------------|----------|---------|
| Summary of | F1x45-10 3x400 | Reg. No. | 012-041 |
| Certificate Holder | | | |
| Name | Nibe AB | | |
| Address | Box 14 | Zip | S-28521 |
| City | Markaryd | Country | Sweden |
| Certification Body | RISE CERT | | |
| Subtype title | F1x45-10 3x400 | | |
| Heat Pump Type | Brine/Water | | |
| Refrigerant | R407c | | |
| Mass of Refrigerant | 2.1 kg | | |

Model: F1145-10 3x400

| Configure model | |
|-------------------------------------|-----------------------|
| Model name | F1145-10 3x400 |
| Application | Heating (medium temp) |
| Units | Indoor |
| Climate Zone | Colder Climate |
| Reversibility | No |
| Cooling mode application (optional) | n/a |

| General Data | |
|--------------|-------------|
| Power supply | 3x400V 50Hz |

Heating

| EN 14511-2 | | |
|-------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Heat output | 9.64 kW | 7.82 kW |
| El input | 2.13 kW | 2.51 kW |
| COP | 4.53 | 3.12 |

| EN 14511-4 | |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure | passed |

Average Climate

This information was generated by the HP KEYMARK database on 18 Mar 2022

EN 12102-1

| | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 194 % | 147 % |
| Prated | 12.00 kW | 10.00 kW |
| SCOP | 5.05 | 3.88 |
| Tbiv | -5 °C | -5 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 9.80 kW | 7.90 kW |
| COP Tj = -7°C | 4.93 | 3.40 |
| Pdh Tj = +2°C | 10.00 kW | 8.70 kW |
| COP Tj = +2°C | 5.18 | 3.91 |
| Pdh Tj = +7°C | 10.20 kW | 9.20 kW |
| COP Tj = +7°C | 5.35 | 4.25 |
| Pdh Tj = 12°C | 10.40 kW | 9.60 kW |
| COP Tj = 12°C | 5.39 | 4.58 |
| Pdh Tj = Tbiv | 9.50 kW | 8.20 kW |
| COP Tj = Tbiv | 4.99 | 3.52 |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|-------------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.70 kW | 7.60 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.80 | 3.19 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.99 | 1.00 |
| WTOL | 65 °C | 65 °C |
| Poff | 2 W | 2 W |
| PTO | 20 W | 10 W |
| PSB | 7 W | 7 W |
| PCK | 14 W | 14 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.30 kW | 2.40 kW |
| Annual energy consumption Qhe | 4906 kWh | 5345 kWh |

Colder Climate

| EN 12102-1 | | |
|--------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

| EN 14825 | | |
|-----------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| η_s | 200 % | 151 % |
| Prated | 12.00 kW | 10.00 kW |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|----------|---------|
| SCOP | 5.20 | 3.98 |
| Tbiv | -15 °C | -15 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 10.10 kW | 8.60 kW |
| COP Tj = -7°C | 5.23 | 3.79 |
| Pdh Tj = +2°C | 10.20 kW | 9.10 kW |
| COP Tj = +2°C | 5.38 | 4.19 |
| Pdh Tj = +7°C | 10.40 kW | 9.40 kW |
| COP Tj = +7°C | 5.45 | 4.52 |
| Pdh Tj = 12°C | 10.40 kW | 9.70 kW |
| COP Tj = 12°C | 5.22 | 4.68 |
| Pdh Tj = Tbiv | 9.90 kW | 8.20 kW |
| COP Tj = Tbiv | 5.08 | 3.55 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.70 kW | 7.60 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.80 | 3.19 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.99 | 1.00 |
| WTOL | 65 °C | 65 °C |
| Poff | 2 W | 2 W |
| PTO | 20 W | 20 W |
| PSB | 7 W | 7 W |
| PCK | 14 W | 14 W |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|--|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.30 kW | 2.40 kW |
| Annual energy consumption Q _{he} | 5695 kWh | 6214 kWh |

Model: F1145-10 PC 3x400

| Configure model | |
|-------------------------------------|-----------------------|
| Model name | F1145-10 PC 3x400 |
| Application | Heating (medium temp) |
| Units | Indoor |
| Climate Zone | Colder Climate |
| Reversibility | No |
| Cooling mode application (optional) | n/a |

| General Data | |
|--------------|-------------|
| Power supply | 3x400V 50Hz |

Heating

| EN 14511-2 | | |
|-------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Heat output | 9.64 kW | 7.82 kW |
| El input | 2.13 kW | 2.51 kW |
| COP | 4.53 | 3.12 |

| EN 14511-4 | |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure | passed |

Average Climate

EN 12102-1

| | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 194 % | 147 % |
| Prated | 12.00 kW | 10.00 kW |
| SCOP | 5.05 | 3.88 |
| Tbiv | -5 °C | -5 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 9.80 kW | 7.90 kW |
| COP Tj = -7°C | 4.93 | 3.40 |
| Pdh Tj = +2°C | 10.00 kW | 8.70 kW |
| COP Tj = +2°C | 5.18 | 3.91 |
| Pdh Tj = +7°C | 10.20 kW | 9.20 kW |
| COP Tj = +7°C | 5.35 | 4.25 |
| Pdh Tj = 12°C | 10.40 kW | 9.60 kW |
| COP Tj = 12°C | 5.39 | 4.58 |
| Pdh Tj = Tbiv | 9.50 kW | 8.20 kW |
| COP Tj = Tbiv | 4.99 | 3.52 |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|-------------|-------------|
| $P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$ | 9.70 kW | 7.60 kW |
| $COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$ | 4.80 | 3.19 |
| $C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$ | 0.99 | 1.00 |
| WTOL | 65 °C | 65 °C |
| Poff | 2 W | 2 W |
| PTO | 20 W | 10 W |
| PSB | 7 W | 7 W |
| PCK | 14 W | 14 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.30 kW | 2.40 kW |
| Annual energy consumption Q_{he} | 4906 kWh | 5345 kWh |

Colder Climate

| EN 12102-1 | | |
|--------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

| EN 14825 | | |
|-----------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| η_s | 200 % | 151 % |
| Prated | 12.00 kW | 10.00 kW |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|----------|---------|
| SCOP | 5.20 | 3.98 |
| Tbiv | -15 °C | -15 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 10.10 kW | 8.60 kW |
| COP Tj = -7°C | 5.23 | 3.79 |
| Pdh Tj = +2°C | 10.20 kW | 9.10 kW |
| COP Tj = +2°C | 5.38 | 4.19 |
| Pdh Tj = +7°C | 10.40 kW | 9.40 kW |
| COP Tj = +7°C | 5.45 | 4.52 |
| Pdh Tj = 12°C | 10.40 kW | 9.70 kW |
| COP Tj = 12°C | 5.22 | 4.68 |
| Pdh Tj = Tbiv | 9.90 kW | 8.20 kW |
| COP Tj = Tbiv | 5.08 | 3.55 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.70 kW | 7.60 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.80 | 3.19 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.99 | 1.00 |
| WTOL | 65 °C | 65 °C |
| Poff | 2 W | 2 W |
| PTO | 20 W | 20 W |
| PSB | 7 W | 7 W |
| PCK | 14 W | 14 W |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|--|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.30 kW | 2.40 kW |
| Annual energy consumption Q _{he} | 5695 kWh | 6214 kWh |

Model: F1245-10 3x400

| Configure model | |
|-------------------------------------|--------------------------|
| Model name | F1245-10 3x400 |
| Application | Heating + DHW + low temp |
| Units | Indoor |
| Climate Zone | Colder Climate |
| Reversibility | No |
| Cooling mode application (optional) | n/a |

| General Data | |
|------------------|-------------|
| Power supply | 3x400V 50Hz |
| Off-peak product | No |

Heating

| EN 14511-2 | | |
|-------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Heat output | 9.64 kW | 7.82 kW |
| El input | 2.13 kW | 2.51 kW |
| COP | 4.53 | 3.12 |

| EN 14511-4 | |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure | passed |

Average Climate

EN 12102-1

| | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 194 % | 147 % |
| Prated | 12.00 kW | 10.00 kW |
| SCOP | 5.05 | 3.88 |
| Tbiv | -5 °C | -5 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 9.80 kW | 7.90 kW |
| COP Tj = -7°C | 4.93 | 3.40 |
| Pdh Tj = +2°C | 10.00 kW | 8.70 kW |
| COP Tj = +2°C | 5.18 | 3.91 |
| Pdh Tj = +7°C | 10.20 kW | 9.20 kW |
| COP Tj = +7°C | 5.35 | 4.25 |
| Pdh Tj = 12°C | 10.40 kW | 9.60 kW |
| COP Tj = 12°C | 5.39 | 4.58 |
| Pdh Tj = Tbiv | 9.50 kW | 8.20 kW |
| COP Tj = Tbiv | 4.99 | 3.52 |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|-------------|-------------|
| $P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$ | 9.70 kW | 7.60 kW |
| $COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$ | 4.80 | 3.19 |
| $C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$ | 0.99 | 1.00 |
| WTOL | 65 °C | 65 °C |
| Poff | 2 W | 2 W |
| PTO | 20 W | 10 W |
| PSB | 7 W | 7 W |
| PCK | 14 W | 14 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.30 kW | 2.40 kW |
| Annual energy consumption Q_{he} | 4906 kWh | 5345 kWh |

Colder Climate

| EN 12102-1 | | |
|--------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

| EN 14825 | | |
|-----------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| η_s | 200 % | 151 % |
| Prated | 12.00 kW | 10.00 kW |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|----------|---------|
| SCOP | 5.20 | 3.98 |
| Tbiv | -15 °C | -15 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 10.10 kW | 8.60 kW |
| COP Tj = -7°C | 5.23 | 3.79 |
| Pdh Tj = +2°C | 10.20 kW | 9.10 kW |
| COP Tj = +2°C | 5.38 | 4.19 |
| Pdh Tj = +7°C | 10.40 kW | 9.40 kW |
| COP Tj = +7°C | 5.45 | 4.52 |
| Pdh Tj = 12°C | 10.40 kW | 9.70 kW |
| COP Tj = 12°C | 5.22 | 4.68 |
| Pdh Tj = Tbiv | 9.90 kW | 8.20 kW |
| COP Tj = Tbiv | 5.08 | 3.55 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.70 kW | 7.60 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.80 | 3.19 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.99 | 1.00 |
| WTOL | 65 °C | 65 °C |
| Poff | 2 W | 2 W |
| PTO | 20 W | 20 W |
| PSB | 7 W | 7 W |
| PCK | 14 W | 14 W |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|--|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.30 kW | 2.40 kW |
| Annual energy consumption Q _{he} | 5695 kWh | 6214 kWh |

Domestic Hot Water (DHW)

Average Climate

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | XL |
| Efficiency η_{DHW} | 96 % |
| COP | 2.40 |
| Heating up time | 1:10 h:min |
| Standby power input | 55.0 W |
| Reference hot water temperature | 50.0 °C |
| Mixed water at 40°C | 235 l |

Colder Climate

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | XL |
| Efficiency η_{DHW} | 96 % |
| COP | 2.40 |
| Heating up time | 1:10 h:min |
| Standby power input | 55.0 W |
| Reference hot water temperature | 50.0 °C |
| Mixed water at 40°C | 235 l |

Model: F1245-10 PC 3x400

Configure model

| | |
|-------------------------------------|--------------------------|
| Model name | F1245-10 PC 3x400 |
| Application | Heating + DHW + low temp |
| Units | Indoor |
| Climate Zone | Colder Climate |
| Reversibility | No |
| Cooling mode application (optional) | n/a |

General Data

| | |
|------------------|-------------|
| Power supply | 3x400V 50Hz |
| Off-peak product | No |

Heating

EN 14511-2

| | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 9.64 kW | 7.82 kW |
| El input | 2.13 kW | 2.51 kW |
| COP | 4.53 | 3.12 |

EN 14511-4

| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure | passed |

Average Climate

EN 12102-1

| | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

EN 14825

| | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| η_s | 194 % | 147 % |
| Prated | 12.00 kW | 10.00 kW |
| SCOP | 5.05 | 3.88 |
| Tbiv | -5 °C | -5 °C |
| TOL | -10 °C | -10 °C |
| Pdh Tj = -7°C | 9.80 kW | 7.90 kW |
| COP Tj = -7°C | 4.93 | 3.40 |
| Pdh Tj = +2°C | 10.00 kW | 8.70 kW |
| COP Tj = +2°C | 5.18 | 3.91 |
| Pdh Tj = +7°C | 10.20 kW | 9.20 kW |
| COP Tj = +7°C | 5.35 | 4.25 |
| Pdh Tj = 12°C | 10.40 kW | 9.60 kW |
| COP Tj = 12°C | 5.39 | 4.58 |
| Pdh Tj = Tbiv | 9.50 kW | 8.20 kW |
| COP Tj = Tbiv | 4.99 | 3.52 |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|-------------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.70 kW | 7.60 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.80 | 3.19 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.99 | 1.00 |
| WTOL | 65 °C | 65 °C |
| Poff | 2 W | 2 W |
| PTO | 20 W | 10 W |
| PSB | 7 W | 7 W |
| PCK | 14 W | 14 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.30 kW | 2.40 kW |
| Annual energy consumption Qhe | 4906 kWh | 5345 kWh |

Colder Climate

| EN 12102-1 | | |
|--------------------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 45 dB(A) | 45 dB(A) |

| EN 14825 | | |
|-----------------|------------------------|---------------------------|
| | Low temperature | Medium temperature |
| η_s | 200 % | 151 % |
| Prated | 12.00 kW | 10.00 kW |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|---|----------|---------|
| SCOP | 5.20 | 3.98 |
| Tbiv | -15 °C | -15 °C |
| TOL | -22 °C | -22 °C |
| Pdh Tj = -7°C | 10.10 kW | 8.60 kW |
| COP Tj = -7°C | 5.23 | 3.79 |
| Pdh Tj = +2°C | 10.20 kW | 9.10 kW |
| COP Tj = +2°C | 5.38 | 4.19 |
| Pdh Tj = +7°C | 10.40 kW | 9.40 kW |
| COP Tj = +7°C | 5.45 | 4.52 |
| Pdh Tj = 12°C | 10.40 kW | 9.70 kW |
| COP Tj = 12°C | 5.22 | 4.68 |
| Pdh Tj = Tbiv | 9.90 kW | 8.20 kW |
| COP Tj = Tbiv | 5.08 | 3.55 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 9.70 kW | 7.60 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.80 | 3.19 |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.99 | 1.00 |
| WTOL | 65 °C | 65 °C |
| Poff | 2 W | 2 W |
| PTO | 20 W | 20 W |
| PSB | 7 W | 7 W |
| PCK | 14 W | 14 W |

This information was generated by the HP KEYMARK database on 18 Mar 2022

| | | |
|--|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 2.30 kW | 2.40 kW |
| Annual energy consumption Q _{he} | 5695 kWh | 6214 kWh |

Domestic Hot Water (DHW)

Average Climate

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | XL |
| Efficiency η_{DHW} | 96 % |
| COP | 2.40 |
| Heating up time | 1:10 h:min |
| Standby power input | 55.0 W |
| Reference hot water temperature | 50.0 °C |
| Mixed water at 40°C | 235 l |

Colder Climate

| EN 16147 | |
|---------------------------------|------------|
| Declared load profile | XL |
| Efficiency η_{DHW} | 96 % |
| COP | 2.40 |
| Heating up time | 1:10 h:min |
| Standby power input | 55.0 W |
| Reference hot water temperature | 50.0 °C |
| Mixed water at 40°C | 235 l |