

Technical Data Sheet

Compressor model **NX21FBa**
 Voltage **220-240V 50Hz ~1**
 Refrigerant **R290**

APPLICATION

| | |
|--------------------|----------------------|
| Application | Low Back Pressure |
| Refrigerant | R290 |
| Evaporating Temp. | -40,0 °C to -10,0 °C |
| Expansion | Capillar/Valve |
| Comp. Cooling | Fan cooled |
| Max. ambient temp. | 43,0 °C |

COMPRESSOR

| | |
|--------------|-----------------------|
| Displacement | 20,72 cm ³ |
| Diameter | 34,93 mm |
| Stroke | 21,62 mm |
| Net Weight | 16,00 Kg |
| Oil type | ISO VG 46 ESTER |
| Oil charge | 650 cm ³ |

MOTOR

| | |
|--------------------------|---------------|
| Nominal Power | 3/4 hp |
| Voltage/Frequency | 220-240V 50Hz |
| Voltage range | 187-255 V |
| Type | CSR |
| Phase number | 1 PH |
| Locked Rotor Amps (LRA) | 24,00 A |
| Max. Cont. Current (MCC) | 6,50 A |
| Main W. resist. at 25°C | 3,04 Ω |
| Start W. resist. at 25°C | 7,10 Ω |

NOMINAL PERFORMANCE

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 780 kCal/h | 675 W |
| COP | 1,44 W/W | 1,11 W/W |
| EER | 1,24 kCal/Wh | 0,96 kCal/Wh |
| Input Power | 631 W | 608 W |
| Current | 3,16 A | 3,05 A |

APPROVALS

TEST CYCLE CONDITIONS

| | ASHRAE LBP (B) | CECOMAF LBP (A) |
|---------------------------------------|-------------------|--------------------|
| Evaporating temp. (T _e) | -23,3 °C | -25,0 °C |
| Condensing temp. (T _c) | 55,0 °C | 55,0 °C |
| Liquid temp. (T _{liq.}) | 32,0 °C | 55,0 °C |
| Ambient temp. (T _{amb.}) | 32,0 °C | 32,0 °C |
| Suction temp. (T _{suction}) | 32,0 °C | 32,0 °C |
| Voltage/Frequency | 220 V 50 Hz | 220 V 50 Hz |

ELECTRICAL COMPONENTS

| | | | |
|-------------------------|---------------------|---------------------|--|
| Starting capacitor | 72- 88 µF 330 V | | |
| Run capacitor | 16 µF 420 V | | |
| Relay | Option 1 | Option 2 | |
| Reference | 2014 170. + NTC15î© | QLZ-12.1A + NTC15î© | |
| Pick-Up | 12,10 A | 12.1 A | |
| Drop-Out | 10,30 A | 10.3 A | |
| Protector | Option 1 | Option 2 | |
| Reference | MRA38134 | T0348 | |
| Current | 15,80 A | 15,40 A | |
| Time check | 7,5-14 seg | 7,5-14 seg | |
| Disc temp. (Open/Close) | 105,00 / 52,00 °C | 105,00 / 52,00 °C | |

This product is approved for R290 and R600a regarding explosion safety according to standard EN 60335-1 and EN 60335-2-34

ASHRAE

| Tc °C | Te °C | Cooling Capacity kCal/h | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40 | -40 | 338 | 392 | 2,07 | 1,00 | 0,86 |
| 40 | -35 | 470 | 440 | 2,28 | 1,24 | 1,07 |
| 40 | -30 | 624 | 488 | 2,50 | 1,49 | 1,28 |
| 40 | -25 | 802 | 535 | 2,72 | 1,74 | 1,50 |
| 40 | -23,3 | 867 | 551 | 2,79 | 1,83 | 1,57 |
| 40 | -20 | 1.002 | 583 | 2,94 | 2,00 | 1,72 |
| 40 | -15 | 1.226 | 630 | 3,16 | 2,26 | 1,95 |
| 40 | -10 | 1.473 | 678 | 3,37 | 2,53 | 2,17 |

| | | | | | | |
|----|-------|-------|-----|------|------|------|
| 45 | -40 | 320 | 396 | 2,08 | 0,94 | 0,81 |
| 45 | -35 | 448 | 451 | 2,33 | 1,16 | 0,99 |
| 45 | -30 | 599 | 505 | 2,58 | 1,38 | 1,19 |
| 45 | -25 | 774 | 559 | 2,83 | 1,61 | 1,38 |
| 45 | -23,3 | 838 | 578 | 2,92 | 1,69 | 1,45 |
| 45 | -20 | 971 | 614 | 3,08 | 1,84 | 1,58 |
| 45 | -15 | 1.191 | 668 | 3,33 | 2,07 | 1,78 |
| 45 | -10 | 1.435 | 722 | 3,58 | 2,31 | 1,99 |

| | | | | | | |
|----|-------|-------|-----|------|------|------|
| 50 | -40 | 302 | 400 | 2,10 | 0,88 | 0,75 |
| 50 | -35 | 426 | 461 | 2,38 | 1,08 | 0,92 |
| 50 | -30 | 575 | 523 | 2,66 | 1,28 | 1,10 |
| 50 | -25 | 746 | 584 | 2,94 | 1,49 | 1,28 |
| 50 | -23,3 | 809 | 604 | 3,04 | 1,56 | 1,34 |
| 50 | -20 | 940 | 645 | 3,22 | 1,70 | 1,46 |
| 50 | -15 | 1.157 | 706 | 3,50 | 1,91 | 1,64 |
| 50 | -10 | 1.398 | 767 | 3,78 | 2,12 | 1,82 |

| | | | | | | |
|----|-------|-------|-----|------|------|------|
| 55 | -40 | 283 | 404 | 2,12 | 0,81 | 0,70 |
| 55 | -35 | 405 | 472 | 2,43 | 1,00 | 0,86 |
| 55 | -30 | 550 | 540 | 2,74 | 1,18 | 1,02 |
| 55 | -25 | 718 | 608 | 3,05 | 1,37 | 1,18 |
| 55 | -23,3 | 780 | 631 | 3,16 | 1,44 | 1,24 |
| 55 | -20 | 909 | 676 | 3,37 | 1,56 | 1,34 |
| 55 | -15 | 1.123 | 743 | 3,68 | 1,76 | 1,51 |
| 55 | -10 | 1.360 | 811 | 3,99 | 1,95 | 1,68 |

| | | | | | | |
|----|-------|-------|-----|------|------|------|
| 60 | -40 | 265 | 408 | 2,14 | 0,75 | 0,65 |
| 60 | -35 | 383 | 483 | 2,48 | 0,92 | 0,79 |
| 60 | -30 | 525 | 558 | 2,82 | 1,09 | 0,94 |
| 60 | -25 | 690 | 632 | 3,17 | 1,27 | 1,09 |
| 60 | -23,3 | 751 | 658 | 3,28 | 1,33 | 1,14 |
| 60 | -20 | 878 | 707 | 3,51 | 1,44 | 1,24 |
| 60 | -15 | 1.088 | 781 | 3,85 | 1,62 | 1,39 |
| 60 | -10 | 1.323 | 856 | 4,20 | 1,80 | 1,55 |

CECOMAF

| Tc °C | Te °C | Cooling Capacity W | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40 | -40 | 366 | 392 | 2,07 | 0,93 | 0,81 |
| 40 | -35 | 518 | 440 | 2,28 | 1,18 | 1,02 |
| 40 | -30 | 692 | 488 | 2,50 | 1,42 | 1,23 |
| 40 | -25 | 886 | 535 | 2,72 | 1,66 | 1,43 |
| 40 | -23,3 | 957 | 551 | 2,79 | 1,74 | 1,50 |
| 40 | -20 | 1.102 | 583 | 2,94 | 1,89 | 1,63 |
| 40 | -15 | 1.340 | 630 | 3,16 | 2,13 | 1,84 |
| 40 | -10 | 1.598 | 678 | 3,37 | 2,36 | 2,04 |

| | | | | | | |
|----|-------|-------|-----|------|------|------|
| 45 | -40 | 333 | 396 | 2,08 | 0,84 | 0,73 |
| 45 | -35 | 473 | 451 | 2,33 | 1,05 | 0,91 |
| 45 | -30 | 634 | 505 | 2,58 | 1,25 | 1,08 |
| 45 | -25 | 816 | 559 | 2,83 | 1,46 | 1,26 |
| 45 | -23,3 | 883 | 578 | 2,92 | 1,53 | 1,32 |
| 45 | -20 | 1.019 | 614 | 3,08 | 1,66 | 1,44 |
| 45 | -15 | 1.244 | 668 | 3,33 | 1,86 | 1,61 |
| 45 | -10 | 1.491 | 722 | 3,58 | 2,06 | 1,78 |

| | | | | | | |
|----|-------|-------|-----|------|------|------|
| 50 | -40 | 300 | 400 | 2,10 | 0,75 | 0,65 |
| 50 | -35 | 427 | 461 | 2,38 | 0,93 | 0,80 |
| 50 | -30 | 576 | 523 | 2,66 | 1,10 | 0,95 |
| 50 | -25 | 745 | 584 | 2,94 | 1,28 | 1,10 |
| 50 | -23,3 | 808 | 604 | 3,04 | 1,34 | 1,15 |
| 50 | -20 | 937 | 645 | 3,22 | 1,45 | 1,26 |
| 50 | -15 | 1.149 | 706 | 3,50 | 1,63 | 1,41 |
| 50 | -10 | 1.383 | 767 | 3,78 | 1,80 | 1,56 |

| | | | | | | |
|----|-------|-------|-----|------|------|------|
| 55 | -40 | 267 | 404 | 2,12 | 0,66 | 0,57 |
| 55 | -35 | 381 | 472 | 2,43 | 0,81 | 0,70 |
| 55 | -30 | 517 | 540 | 2,74 | 0,96 | 0,83 |
| 55 | -25 | 675 | 608 | 3,05 | 1,11 | 0,96 |
| 55 | -23,3 | 733 | 631 | 3,16 | 1,16 | 1,00 |
| 55 | -20 | 854 | 676 | 3,37 | 1,26 | 1,09 |
| 55 | -15 | 1.054 | 743 | 3,68 | 1,42 | 1,22 |
| 55 | -10 | 1.275 | 811 | 3,99 | 1,57 | 1,36 |

| | | | | | | |
|----|-------|-------|-----|------|------|------|
| 60 | -40 | 233 | 408 | 2,14 | 0,57 | 0,49 |
| 60 | -35 | 336 | 483 | 2,48 | 0,70 | 0,60 |
| 60 | -30 | 459 | 558 | 2,82 | 0,82 | 0,71 |
| 60 | -25 | 604 | 632 | 3,17 | 0,96 | 0,83 |
| 60 | -23,3 | 659 | 658 | 3,28 | 1,00 | 0,87 |
| 60 | -20 | 771 | 707 | 3,51 | 1,09 | 0,94 |
| 60 | -15 | 959 | 781 | 3,85 | 1,23 | 1,06 |
| 60 | -10 | 1.168 | 856 | 4,20 | 1,37 | 1,18 |

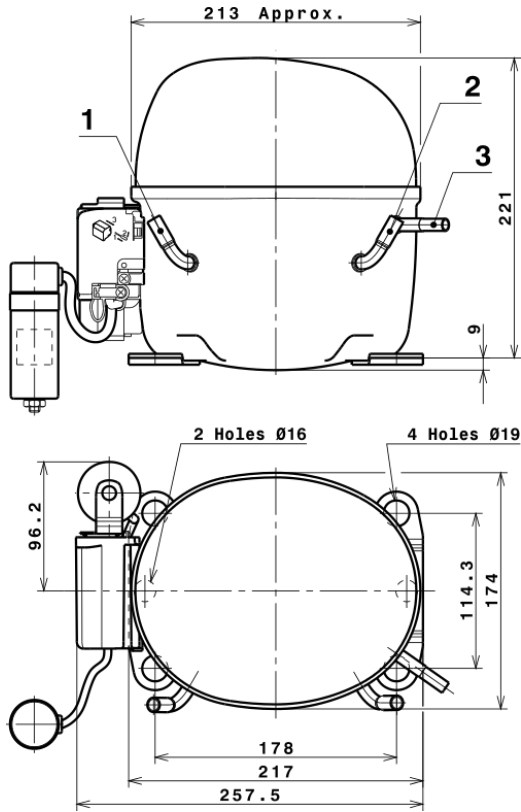
EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|---------------|---------------------|
| 1 | 3.226,7346133022 | 316,8826404981 | 1,7085534976 | 30,105554596501 |
| 2 | 81,6727461626 | -1,2508482651 | -0,0054868284 | 0,8525487827921 |
| 3 | -27,1624484173 | 11,8875262854 | 0,0549411246 | -0,11047198928667 |
| 4 | 0,4167884034 | 0,0005530349 | 0,0000166891 | 0,0062131321677425 |
| 5 | -0,5117782496 | 0,2767547445 | 0,0012802361 | -0,0016306187346179 |

| | |
|----------|---|
| Equation | $x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$ |
|----------|---|

Technical Data Sheet

COMPRESSOR DIMENSIONS

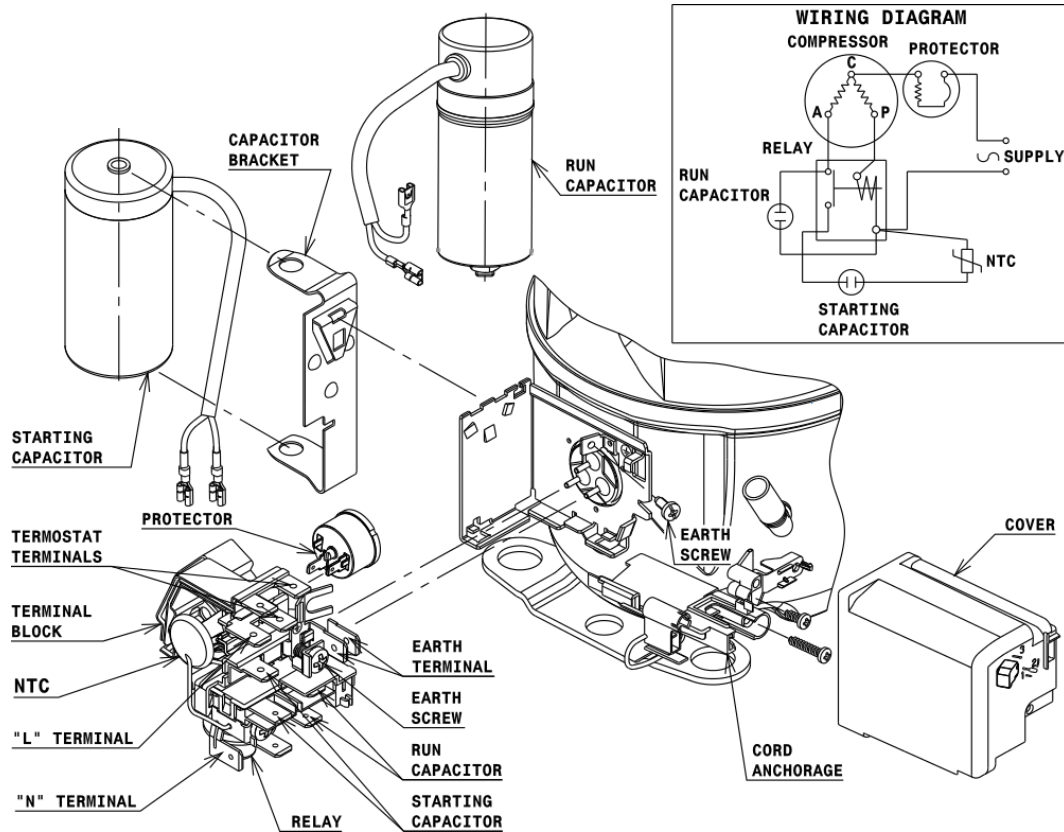


DESIGNATION INTERNAL DIAM.

| DESIGNATION | INTERNAL DIAM. |
|-------------|----------------|
| 1 Service | 9,7 mm |
| 2 Suction | 9,7 mm |
| 3 Discharge | 6,5 mm |

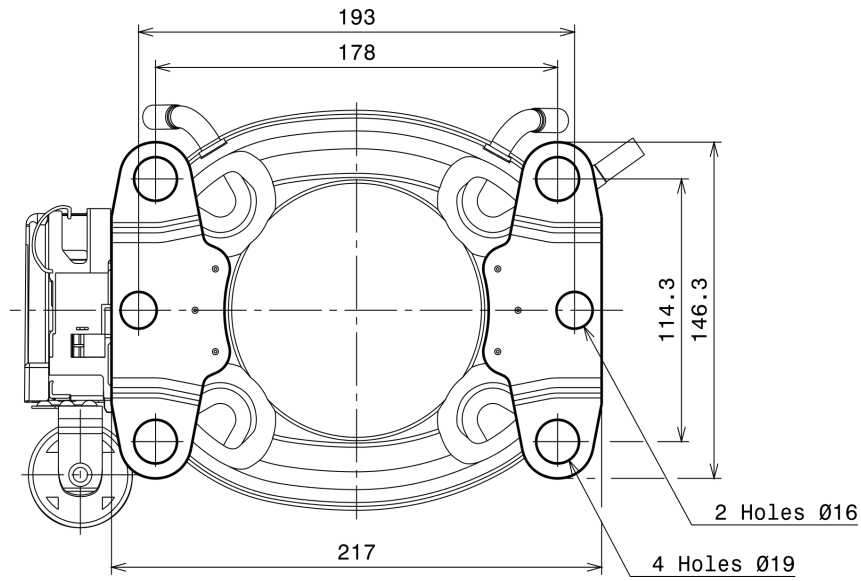
WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (CURRENT RELAY + NTC) (X range)



Technical Data Sheet

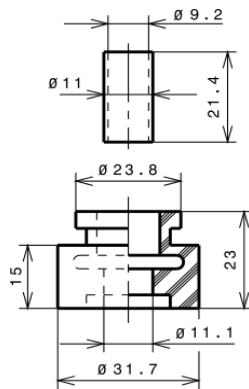
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

$\varnothing 19$ holes (178x114.3 net)



SOA

SOA R290 LBP

