

Technical Data Sheet

Compressor model **NX18TBa**
 Voltage **220-240V 50Hz ~1**
 Refrigerant **R290**

| APPLICATION | | COMPRESSOR | | MOTOR | |
|--------------------|---------------------------|--------------|-----------------------|--------------------------|---------------|
| Application | High-Medium Back Pressure | Displacement | 18,40 cm ³ | Nominal Power | 3/4 hp |
| Refrigerant | R290 | Diameter | 34,93 mm | Voltage/Frequency | 220-240V 50Hz |
| Evaporating Temp. | -25,0 °C to 10,0 °C | Stroke | 19,20 mm | Voltage range | 187-255 V |
| Expansion | Capillar/Valve | Net Weight | 16,14 Kg | Type | CSR |
| Comp. Cooling | Fan cooled | Oil type | ISO VG 32 ESTER | Phase number | 1 PH |
| Max. ambient temp. | 43,0 °C | Oil charge | 500 cm ³ | Locked Rotor Amps (LRA) | 31,50 A |
| | | | | Max. Cont. Current (MCC) | 6,70 A |
| | | | | Main W. resist. at 25°C | 2,70 Ω |
| | | | | Start W. resist. at 25°C | 7,85 Ω |

NOMINAL PERFORMANCE

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 2.102 kCal/h | 2.039 W |
| COP | 2,61 W/W | 2,22 W/W |
| EER | 2,24 kCal/Wh | 1,92 kCal/Wh |
| Input Power | 937 W | 919 W |
| Current | 4,76 A | 4,68 A |

APPROVALS



TEST CYCLE CONDITIONS

| | ASHRAE HMBP (D) | CECOMAF HMBP (C) |
|---------------------------------------|--------------------|---------------------|
| Evaporating temp. (T _e) | 7,2 °C | 5,0 °C |
| Condensing temp. (T _c) | 55,0 °C | 55,0 °C |
| Liquid temp. (T _{liq.}) | 46,0 °C | 55,0 °C |
| Ambient temp. (T _{amb.}) | 35,0 °C | 32,0 °C |
| Suction temp. (T _{suction}) | 35,0 °C | 32,0 °C |
| Voltage/Frequency | 220 V 50 Hz | 220 V 50 Hz |

ELECTRICAL COMPONENTS

| | | | | |
|-------------------------|---------------------|---------------------|--|--|
| Starting capacitor | 88-108 µF 330 V | | | |
| Run capacitor | 16 µF 420 V | | | |
| Relay | Option 1 | Option 2 | | |
| Reference | 2014 180. + NTC15î© | QLZ 16.7A + NTC15î© | | |
| Pick-Up | 16.7 A | 16.7 A | | |
| Drop-Out | 14 A | 14 A | | |
| Protector | Option 1 | | | |
| Reference | T0253 | | | |
| Current | 15,00 A | | | |
| Time check | 7,5-14 seg | | | |
| Disc temp. (Open/Close) | 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 | -25 | 662 | 528 | 3,00 | 1,46 | 1,25 |
| 40 | -20 | 850 | 573 | 3,20 | 1,72 | 1,48 |
| 40 | -15 | 1.078 | 616 | 3,38 | 2,04 | 1,75 |
| 40 | -10 | 1.346 | 656 | 3,56 | 2,39 | 2,05 |
| 40 | -5 | 1.655 | 694 | 3,72 | 2,77 | 2,38 |
| 40 | 0 | 2.003 | 730 | 3,87 | 3,19 | 2,75 |
| 40 | 5 | 2.392 | 763 | 4,02 | 3,65 | 3,14 |
| 40 | 7,2 | 2.576 | 777 | 4,07 | 3,86 | 3,32 |
| 40 | 10 | 2.821 | 793 | 4,15 | 4,14 | 3,56 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -25 | 603 | 531 | 3,01 | 1,32 | 1,14 |
| 45 | -20 | 776 | 584 | 3,24 | 1,54 | 1,33 |
| 45 | -15 | 988 | 635 | 3,46 | 1,81 | 1,56 |
| 45 | -10 | 1.241 | 683 | 3,67 | 2,11 | 1,82 |
| 45 | -5 | 1.534 | 729 | 3,87 | 2,45 | 2,11 |
| 45 | 0 | 1.868 | 772 | 4,05 | 2,81 | 2,42 |
| 45 | 5 | 2.241 | 813 | 4,23 | 3,21 | 2,76 |
| 45 | 7,2 | 2.418 | 830 | 4,30 | 3,39 | 2,91 |
| 45 | 10 | 2.655 | 851 | 4,39 | 3,63 | 3,12 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 50 | -25 | 544 | 534 | 3,03 | 1,18 | 1,02 |
| 50 | -20 | 701 | 595 | 3,29 | 1,37 | 1,18 |
| 50 | -15 | 899 | 653 | 3,54 | 1,60 | 1,38 |
| 50 | -10 | 1.136 | 709 | 3,79 | 1,86 | 1,60 |
| 50 | -5 | 1.414 | 763 | 4,02 | 2,15 | 1,85 |
| 50 | 0 | 1.732 | 814 | 4,24 | 2,47 | 2,13 |
| 50 | 5 | 2.090 | 863 | 4,44 | 2,82 | 2,42 |
| 50 | 7,2 | 2.260 | 884 | 4,53 | 2,98 | 2,56 |
| 50 | 10 | 2.488 | 909 | 4,64 | 3,18 | 2,74 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 55 | -25 | 485 | 537 | 3,04 | 1,05 | 0,90 |
| 55 | -20 | 627 | 606 | 3,34 | 1,20 | 1,03 |
| 55 | -15 | 809 | 672 | 3,62 | 1,40 | 1,20 |
| 55 | -10 | 1.031 | 736 | 3,90 | 1,63 | 1,40 |
| 55 | -5 | 1.293 | 797 | 4,16 | 1,89 | 1,62 |
| 55 | 0 | 1.596 | 856 | 4,42 | 2,17 | 1,86 |
| 55 | 5 | 1.939 | 913 | 4,66 | 2,47 | 2,12 |
| 55 | 7,2 | 2.102 | 937 | 4,76 | 2,61 | 2,24 |
| 55 | 10 | 2.321 | 967 | 4,89 | 2,79 | 2,40 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 60 | -25 | 426 | 540 | 3,05 | 0,92 | 0,79 |
| 60 | -20 | 552 | 617 | 3,39 | 1,04 | 0,90 |
| 60 | -15 | 719 | 691 | 3,71 | 1,21 | 1,04 |
| 60 | -10 | 926 | 763 | 4,01 | 1,41 | 1,21 |
| 60 | -5 | 1.173 | 832 | 4,31 | 1,64 | 1,41 |
| 60 | 0 | 1.460 | 899 | 4,60 | 1,89 | 1,62 |
| 60 | 5 | 1.787 | 963 | 4,87 | 2,16 | 1,86 |
| 60 | 7,2 | 1.944 | 991 | 4,99 | 2,28 | 1,96 |
| 60 | 10 | 2.155 | 1.025 | 5,13 | 2,45 | 2,10 |

CECOMAF

| Tc °C | Te °C | Cooling Capacity W | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40 | -25 | 712 | 531 | 3,01 | 1,34 | 1,16 |
| 40 | -20 | 917 | 576 | 3,21 | 1,59 | 1,37 |
| 40 | -15 | 1.164 | 619 | 3,40 | 1,88 | 1,62 |
| 40 | -10 | 1.453 | 660 | 3,57 | 2,20 | 1,90 |
| 40 | -5 | 1.784 | 698 | 3,74 | 2,55 | 2,21 |
| 40 | 0 | 2.157 | 734 | 3,89 | 2,94 | 2,54 |
| 40 | 5 | 2.572 | 768 | 4,04 | 3,35 | 2,89 |
| 40 | 7,2 | 2.768 | 782 | 4,10 | 3,54 | 3,06 |
| 40 | 10 | 3.029 | 799 | 4,17 | 3,79 | 3,28 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 45 | -25 | 645 | 534 | 3,03 | 1,21 | 1,04 |
| 45 | -20 | 832 | 587 | 3,26 | 1,42 | 1,22 |
| 45 | -15 | 1.060 | 638 | 3,48 | 1,66 | 1,43 |
| 45 | -10 | 1.331 | 687 | 3,69 | 1,94 | 1,67 |
| 45 | -5 | 1.643 | 733 | 3,89 | 2,24 | 1,94 |
| 45 | 0 | 1.998 | 777 | 4,08 | 2,57 | 2,22 |
| 45 | 5 | 2.394 | 818 | 4,25 | 2,93 | 2,53 |
| 45 | 7,2 | 2.582 | 836 | 4,33 | 3,09 | 2,67 |
| 45 | 10 | 2.833 | 857 | 4,42 | 3,31 | 2,86 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 50 | -25 | 578 | 537 | 3,04 | 1,08 | 0,93 |
| 50 | -20 | 746 | 598 | 3,31 | 1,25 | 1,08 |
| 50 | -15 | 956 | 657 | 3,56 | 1,46 | 1,26 |
| 50 | -10 | 1.208 | 714 | 3,80 | 1,69 | 1,46 |
| 50 | -5 | 1.502 | 768 | 4,04 | 1,96 | 1,69 |
| 50 | 0 | 1.838 | 819 | 4,26 | 2,24 | 1,94 |
| 50 | 5 | 2.216 | 869 | 4,47 | 2,55 | 2,20 |
| 50 | 7,2 | 2.396 | 889 | 4,56 | 2,69 | 2,33 |
| 50 | 10 | 2.636 | 915 | 4,67 | 2,88 | 2,49 |

| | | | | | | |
|----|-----|-------|-----|------|------|------|
| 55 | -25 | 511 | 540 | 3,05 | 0,95 | 0,82 |
| 55 | -20 | 661 | 609 | 3,35 | 1,09 | 0,94 |
| 55 | -15 | 852 | 676 | 3,64 | 1,26 | 1,09 |
| 55 | -10 | 1.086 | 740 | 3,92 | 1,47 | 1,27 |
| 55 | -5 | 1.362 | 802 | 4,18 | 1,70 | 1,47 |
| 55 | 0 | 1.679 | 862 | 4,44 | 1,95 | 1,68 |
| 55 | 5 | 2.039 | 919 | 4,68 | 2,22 | 1,92 |
| 55 | 7,2 | 2.210 | 943 | 4,79 | 2,34 | 2,02 |
| 55 | 10 | 2.440 | 974 | 4,92 | 2,51 | 2,17 |

| | | | | | | |
|----|-----|-------|-------|------|------|------|
| 60 | -25 | 445 | 543 | 3,07 | 0,82 | 0,71 |
| 60 | -20 | 576 | 620 | 3,40 | 0,93 | 0,80 |
| 60 | -15 | 749 | 695 | 3,72 | 1,08 | 0,93 |
| 60 | -10 | 964 | 767 | 4,03 | 1,26 | 1,09 |
| 60 | -5 | 1.221 | 837 | 4,33 | 1,46 | 1,26 |
| 60 | 0 | 1.520 | 904 | 4,62 | 1,68 | 1,45 |
| 60 | 5 | 1.861 | 969 | 4,90 | 1,92 | 1,66 |
| 60 | 7,2 | 2.024 | 997 | 5,02 | 2,03 | 1,75 |
| 60 | 10 | 2.244 | 1.032 | 5,16 | 2,17 | 1,88 |

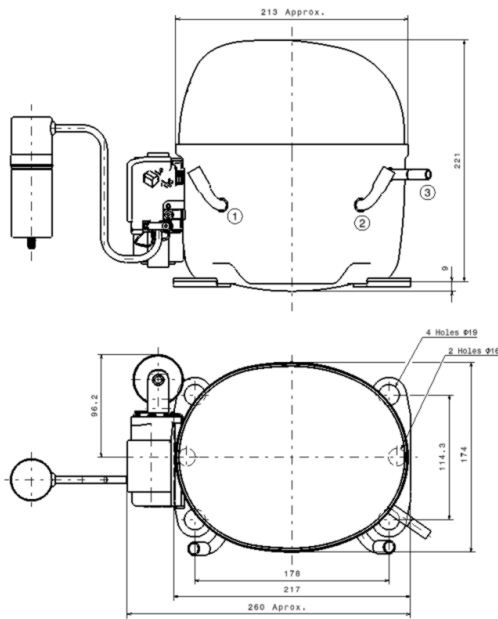
EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|---------------|---------------------|
| 1 | 3.436,3720289564 | 404,2278535929 | 2,4890809238 | 30,83467162276 |
| 2 | 108,6289945479 | -5,6770498906 | -0,0240317919 | 1,0793850335493 |
| 3 | -32,7782671798 | 8,7444893338 | 0,0372769319 | -0,14426029295144 |
| 4 | 0,8234516925 | -0,0445118723 | -0,0002094041 | 0,012847225576462 |
| 5 | -0,7737670156 | 0,3250969933 | 0,0013839455 | -0,0020056335206285 |

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

Technical Data Sheet

COMPRESSOR DIMENSIONS

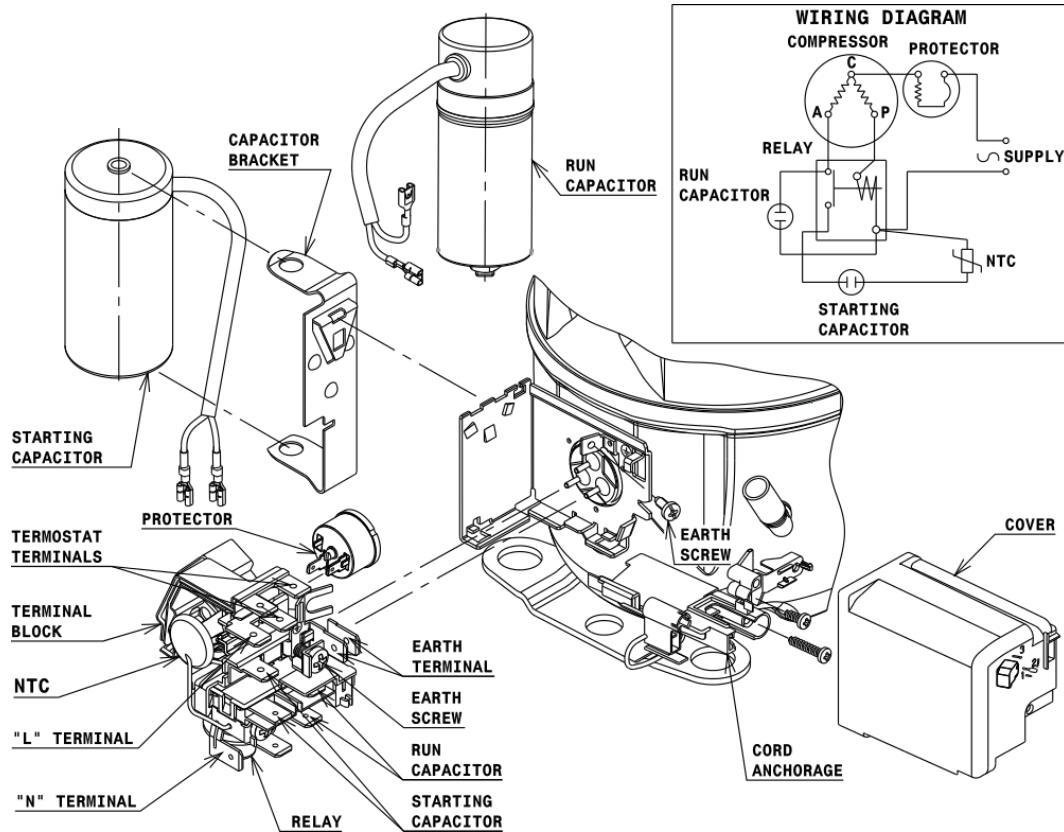


DESIGNATION INTERNAL DIAM.

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

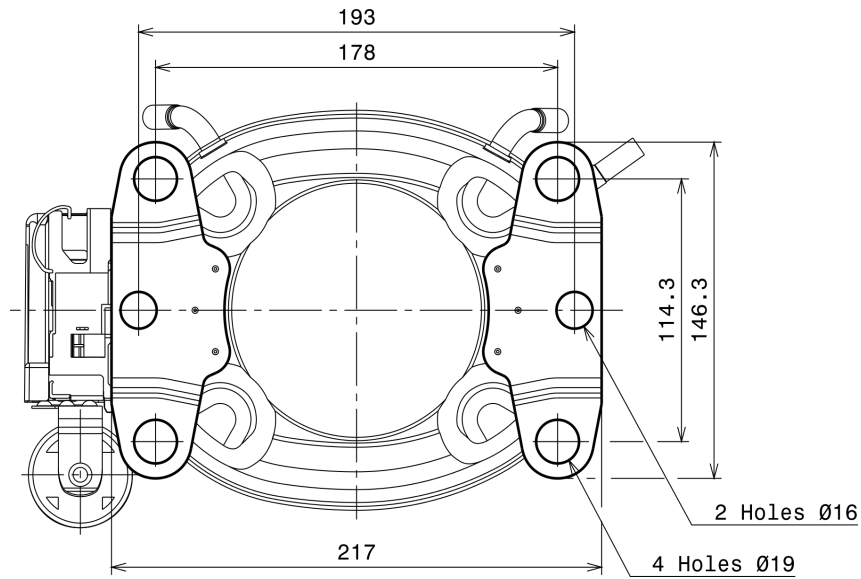
WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

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



Technical Data Sheet

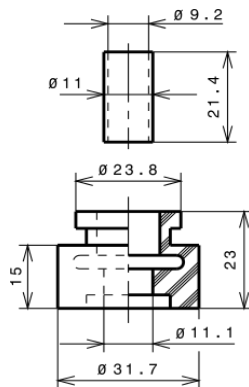
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

Ø19 holes (178x114.3 net)



SOA

SOA R290 HMBP

