

# B43H Technical Data Sheet

Compressor model **B43H**  
 Voltage **220-240V 50/60Hz ~1**  
 Refrigerant **R134a**

## APPLICATION

Application Low Back Pressure  
 Refrigerant R134a  
 Evaporating Temp. -35,0 °C to -15,0 °C  
 Expansion Capillar  
 Comp. Cooling Static/Fan cooled  
 Max. ambient temp. 43,0 °C  
 Compatible refriger. R1234yf

## COMPRESSOR

Displacement 4,30 cm<sup>3</sup>  
 Diameter 19,00 mm  
 Stroke 7,60 mm  
 Net Weight 5,40 Kg  
 Oil type ISO VG 15 ESTER  
 Oil charge 130 cm<sup>3</sup>

## MOTOR

Nominal Power 1/7 hp  
 Voltage/Frequency 220-240V 50Hz  
 Voltage range 187-255 V  
 Type RSIR  
 Phase number 1 PH  
 Locked Rotor Amps (LRA) 4,27 A  
 Main W. resist. at 25°C 26,50 Q  
 Start W. resist. at 25°C 9,40 Q

## NOMINAL PERFORMANCE

|                  | ASHRAE       | CECOMAF      |
|------------------|--------------|--------------|
| Cooling Capacity | 84 kCal/h    | 71 W         |
| COP              | 1,00 W/W     | 0,76 W/W     |
| EER              | 0,86 kCal/Wh | 0,66 kCal/Wh |
| Input Power      | 97 W         | 93 W         |
| Current          | 0,85 A       | 0,84 A       |

## TEST CYCLE CONDITIONS

|                                       | ASHRAE<br>LBP (B) | CECOMAF<br>LBP (A) |
|---------------------------------------|-------------------|--------------------|
| Evaporating temp. (T <sub>e</sub> )   | -23,3 °C          | -25,0 °C           |
| Condensing temp. (T <sub>c</sub> )    | 55,0 °C           | 55,0 °C            |
| Liquid temp. (T <sub>liq.</sub> )     | 32,0 °C           | 55,0 °C            |
| Ambient temp. (T <sub>amb.</sub> )    | 32,0 °C           | 32,0 °C            |
| Suction temp. (T <sub>suction</sub> ) | 32,0 °C           | 32,0 °C            |
| Voltage/Frequency                     | 220 V 50 Hz       | 220 V 50 Hz        |

## ELECTRICAL COMPONENTS

|                         |                |                     |                   |  |
|-------------------------|----------------|---------------------|-------------------|--|
| Relay                   | Option 1       | Option 2            |                   |  |
| Reference               | JPQII-22 (002) | QP2-22 (002)        |                   |  |
| Voltage                 | V              | V                   |                   |  |
| Resistance              | Q              | Q                   |                   |  |
| Protector               | Option 1       | Option 2            | Option 3          |  |
| Reference               | BT37-120 (092) | BT37-120A61D3 (092) | DRB15N61A1 (092)  |  |
| Current                 |                |                     | 4,80 A            |  |
| Time check              |                |                     | 7-16 seg          |  |
| Disc temp. (Open/Close) |                |                     | 135,00 / 61,00 °C |  |

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## ASHRAE

| Tc<br>°C | Te<br>°C | Cooling<br>Capacity<br>kCal/h | Consumption<br>W | Current<br>A | COP<br>W/W | EER<br>kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40       | -35      | 48                            | 88               | 0,83         | 0,63       | 0,54           |
| 40       | -30      | 68                            | 89               | 0,83         | 0,90       | 0,77           |
| 40       | -25      | 93                            | 93               | 0,84         | 1,17       | 1,00           |
| 40       | -23,3    | 103                           | 95               | 0,84         | 1,25       | 1,08           |
| 40       | -20      | 122                           | 101              | 0,86         | 1,41       | 1,21           |
| 40       | -15      | 156                           | 113              | 0,88         | 1,60       | 1,38           |
| 40       | -10      | 193                           | 129              | 0,90         | 1,75       | 1,50           |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 45 | -35   | 44  | 85  | 0,82 | 0,60 | 0,51 |
| 45 | -30   | 63  | 87  | 0,83 | 0,85 | 0,73 |
| 45 | -25   | 87  | 93  | 0,84 | 1,09 | 0,94 |
| 45 | -23,3 | 96  | 96  | 0,84 | 1,17 | 1,00 |
| 45 | -20   | 115 | 103 | 0,86 | 1,31 | 1,12 |
| 45 | -15   | 148 | 116 | 0,88 | 1,48 | 1,27 |
| 45 | -10   | 184 | 133 | 0,91 | 1,61 | 1,38 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 50 | -35   | 39  | 82  | 0,81 | 0,56 | 0,48 |
| 50 | -30   | 58  | 85  | 0,82 | 0,79 | 0,68 |
| 50 | -25   | 81  | 93  | 0,84 | 1,02 | 0,87 |
| 50 | -23,3 | 90  | 96  | 0,85 | 1,09 | 0,93 |
| 50 | -20   | 109 | 104 | 0,86 | 1,21 | 1,04 |
| 50 | -15   | 140 | 119 | 0,89 | 1,37 | 1,17 |
| 50 | -10   | 176 | 138 | 0,92 | 1,48 | 1,27 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 55 | -35   | 35  | 78  | 0,81 | 0,52 | 0,45 |
| 55 | -30   | 53  | 84  | 0,82 | 0,74 | 0,63 |
| 55 | -25   | 75  | 93  | 0,84 | 0,94 | 0,81 |
| 55 | -23,3 | 84  | 97  | 0,85 | 1,00 | 0,86 |
| 55 | -20   | 102 | 106 | 0,86 | 1,12 | 0,96 |
| 55 | -15   | 132 | 122 | 0,89 | 1,26 | 1,08 |
| 55 | -10   | 167 | 142 | 0,92 | 1,36 | 1,17 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 60 | -35   | 31  | 75  | 0,80 | 0,48 | 0,41 |
| 60 | -30   | 48  | 82  | 0,81 | 0,68 | 0,58 |
| 60 | -25   | 69  | 93  | 0,84 | 0,87 | 0,74 |
| 60 | -23,3 | 78  | 98  | 0,85 | 0,92 | 0,79 |
| 60 | -20   | 95  | 107 | 0,87 | 1,03 | 0,88 |
| 60 | -15   | 124 | 125 | 0,90 | 1,15 | 0,99 |
| 60 | -10   | 158 | 147 | 0,93 | 1,25 | 1,08 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 65 | -35   | 27  | 72  | 0,79 | 0,43 | 0,37 |
| 65 | -30   | 43  | 81  | 0,81 | 0,62 | 0,53 |
| 65 | -25   | 63  | 93  | 0,84 | 0,79 | 0,68 |
| 65 | -23,3 | 71  | 98  | 0,85 | 0,84 | 0,73 |
| 65 | -20   | 88  | 109 | 0,87 | 0,94 | 0,81 |
| 65 | -15   | 117 | 128 | 0,90 | 1,06 | 0,91 |
| 65 | -10   | 149 | 152 | 0,93 | 1,15 | 0,99 |

## CECOMAF

| Tc<br>°C | Te<br>°C | Cooling<br>Capacity<br>W | Consumption<br>W | Current<br>A | COP<br>W/W | EER<br>kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40       | -35      | 52                       | 88               | 0,83         | 0,59       | 0,51           |
| 40       | -30      | 76                       | 89               | 0,83         | 0,86       | 0,74           |
| 40       | -25      | 104                      | 93               | 0,84         | 1,11       | 0,96           |
| 40       | -23,3    | 114                      | 95               | 0,84         | 1,19       | 1,03           |
| 40       | -20      | 135                      | 101              | 0,86         | 1,33       | 1,15           |
| 40       | -15      | 171                      | 113              | 0,88         | 1,51       | 1,30           |
| 40       | -10      | 210                      | 129              | 0,90         | 1,63       | 1,41           |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 45 | -35   | 46  | 85  | 0,82 | 0,54 | 0,47 |
| 45 | -30   | 67  | 87  | 0,83 | 0,77 | 0,67 |
| 45 | -25   | 93  | 93  | 0,84 | 1,00 | 0,86 |
| 45 | -23,3 | 102 | 96  | 0,84 | 1,07 | 0,92 |
| 45 | -20   | 122 | 103 | 0,86 | 1,19 | 1,03 |
| 45 | -15   | 155 | 116 | 0,88 | 1,34 | 1,16 |
| 45 | -10   | 193 | 133 | 0,91 | 1,45 | 1,25 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 50 | -35   | 39  | 82  | 0,81 | 0,48 | 0,42 |
| 50 | -30   | 59  | 85  | 0,82 | 0,69 | 0,59 |
| 50 | -25   | 82  | 93  | 0,84 | 0,88 | 0,76 |
| 50 | -23,3 | 91  | 96  | 0,85 | 0,94 | 0,81 |
| 50 | -20   | 109 | 104 | 0,86 | 1,05 | 0,90 |
| 50 | -15   | 140 | 119 | 0,89 | 1,17 | 1,01 |
| 50 | -10   | 175 | 138 | 0,92 | 1,27 | 1,10 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 55 | -35   | 33  | 78  | 0,81 | 0,42 | 0,37 |
| 55 | -30   | 50  | 84  | 0,82 | 0,60 | 0,52 |
| 55 | -25   | 71  | 93  | 0,84 | 0,76 | 0,66 |
| 55 | -23,3 | 79  | 97  | 0,85 | 0,82 | 0,71 |
| 55 | -20   | 96  | 106 | 0,86 | 0,91 | 0,78 |
| 55 | -15   | 125 | 122 | 0,89 | 1,02 | 0,88 |
| 55 | -10   | 157 | 142 | 0,92 | 1,10 | 0,95 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 60 | -35   | 27  | 75  | 0,80 | 0,36 | 0,31 |
| 60 | -30   | 42  | 82  | 0,81 | 0,51 | 0,44 |
| 60 | -25   | 60  | 93  | 0,84 | 0,65 | 0,56 |
| 60 | -23,3 | 68  | 98  | 0,85 | 0,69 | 0,60 |
| 60 | -20   | 83  | 107 | 0,87 | 0,77 | 0,67 |
| 60 | -15   | 109 | 125 | 0,90 | 0,87 | 0,75 |
| 60 | -10   | 140 | 147 | 0,93 | 0,95 | 0,82 |

|    |       |     |     |      |      |      |
|----|-------|-----|-----|------|------|------|
| 65 | -35   | 21  | 72  | 0,79 | 0,29 | 0,25 |
| 65 | -30   | 33  | 81  | 0,81 | 0,41 | 0,35 |
| 65 | -25   | 50  | 93  | 0,84 | 0,53 | 0,46 |
| 65 | -23,3 | 56  | 98  | 0,85 | 0,57 | 0,49 |
| 65 | -20   | 70  | 109 | 0,87 | 0,64 | 0,55 |
| 65 | -15   | 94  | 128 | 0,90 | 0,73 | 0,63 |
| 65 | -10   | 122 | 152 | 0,93 | 0,81 | 0,70 |

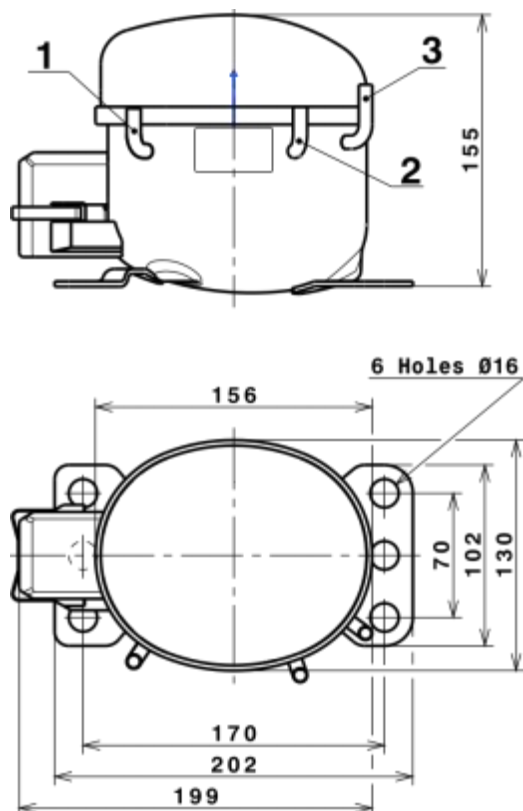
## EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A)  | Mass Flow (kg/h)     |
|---|----------------------|-----------------|--------------|----------------------|
| 1 | 475,5322560443       | 112,2162989092  | 0,8755831224 | 8,7315732344283      |
| 2 | 13,3727526558        | 2,5613205636    | 0,0025018350 | 0,26798518847136     |
| 3 | -4,4924600900        | 1,5676096843    | 0,0023223820 | -0,050297468439225   |
| 4 | 0,0763558404         | 0,0752368335    | 0,0000826207 | 0,0020821578871276   |
| 5 | -0,0926692799        | 0,0627672983    | 0,0001079902 | -0,00087587056209272 |

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

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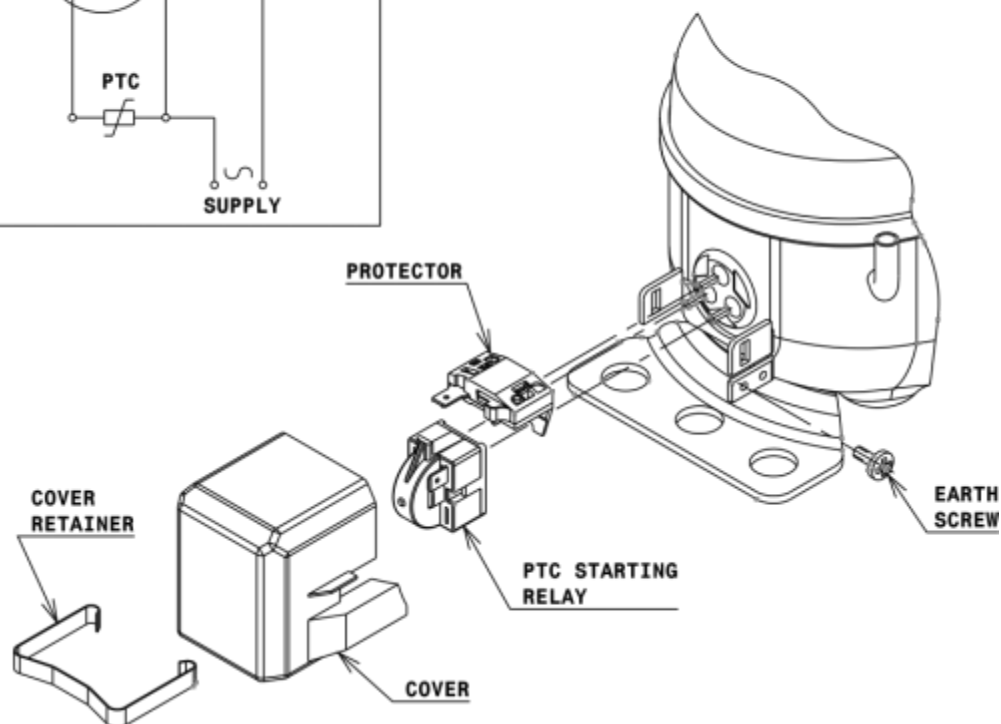
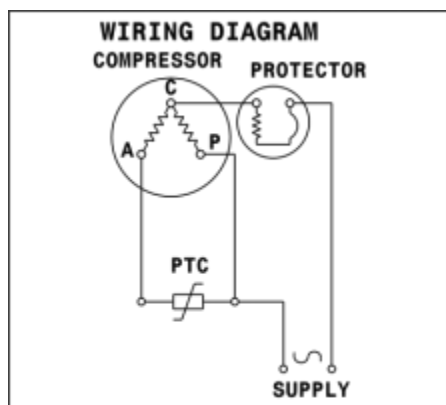
## COMPRESSOR DIMENSIONS



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

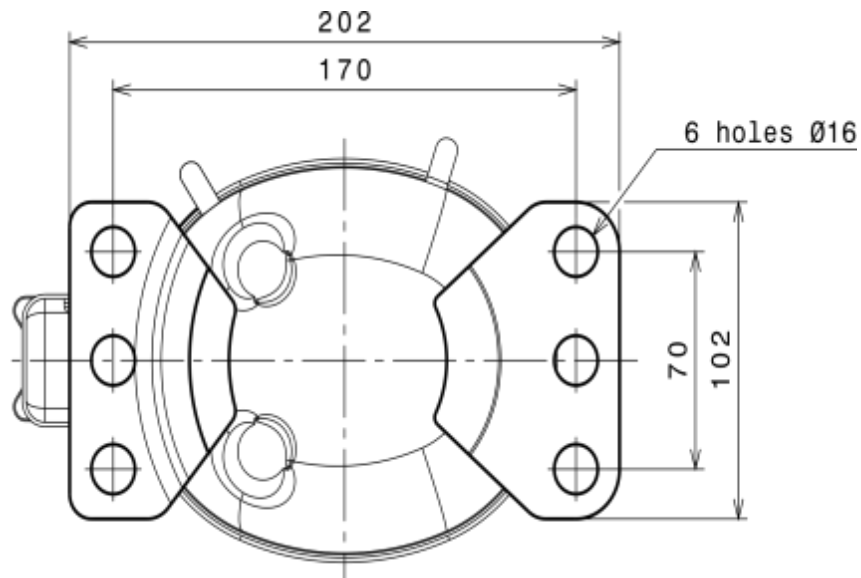
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### RSIR CONNECTION (PTC) (B, Small L ranges)



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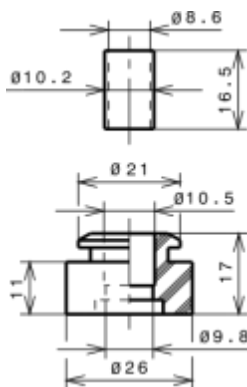
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

Ø16 holes (170x70 net)



## SOA

SOA R134a LBP

