

# **FREEBLOCK BT R404a**

**ENERGY EFFICIENCY  
DATA SHEETS**

Model	<b>FREEBLOCK - FB 3N</b>			
Refrigerating Fluid	<b>R404A</b>			
	Element	Symbol	Value	Unit
<b>Evaporation temperature</b>		$t$	<b>-35°C</b>	°C
<b>Annual consumption of electrical energy</b>		$Q$	<b>x</b>	kWh/a
<b>Seasonal energy efficiency ratio</b>		$SEPR$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 32°C (Point A)</b>				
Nominal cooling capacity		$P_A$	<b>0,66</b>	kW
Nominal absorbed power		$D_A$	<b>0,68</b>	kW
<b>Nominal COP</b>		$COP_A$	<b>0,97</b>	
<b>Parameters at full load and at a room temperature of 25°C (Point B)</b>				
Nominal cooling capacity		$P_B$	<b>0,72</b>	kW
Nominal absorbed power		$D_B$	<b>0,67</b>	kW
<b>Declared COP</b>		$COP_B$	<b>1,07</b>	
<b>Parameters at full load and at a room temperature of 15°C (Point C)</b>				
Nominal cooling capacity		$P_C$	<b>x</b>	kW
Nominal absorbed power		$D_C$	<b>x</b>	kW
<b>Declared COP</b>		$COP_C$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 5°C (Point D)</b>				
Nominal cooling capacity		$P_D$	<b>x</b>	kW
Nominal absorbed power		$D_A$	<b>x</b>	kW
<b>Declared COP</b>		$COP_D$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 43°C</b>				
Nominal cooling capacity		$P_3$	<b>0,56</b>	kW
Nominal absorbed power		$D_3$	<b>0,66</b>	kW
<b>Declared COP</b>		$COP_3$	<b>0,85</b>	
Control of capacity		<i>fixed</i>		
Degradation coefficient of the units with a fixed and progressive capacity		$Cdc$	<b>0,25</b>	
EPTA S.p.A. Unità Locale Via delle Monachelle Vecchia, 7 00071 - Pomezia (RM) - Italia				

Model	<b>FREEBLOCK - FB 6N</b>			
Refrigerating Fluid	<b>R404A</b>			
	Element	Symbol	Value	Unit
<b>Evaporation temperature</b>		$t$	<b>-35°C</b>	°C
<b>Annual consumption of electrical energy</b>		$Q$	<b>x</b>	kWh/a
<b>Seasonal energy efficiency ratio</b>		$SEPR$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 32°C (Point A)</b>				
Nominal cooling capacity		$P_A$	<b>0,64</b>	kW
Nominal absorbed power		$D_A$	<b>0,67</b>	kW
<b>Nominal COP</b>		<b><math>COP_A</math></b>	<b>0,95</b>	
<b>Parameters at full load and at a room temperature of 25°C (Point B)</b>				
Nominal cooling capacity		$P_B$	<b>0,70</b>	kW
Nominal absorbed power		$D_B$	<b>0,67</b>	kW
<b>Declared COP</b>		<b><math>COP_B</math></b>	<b>1,04</b>	
<b>Parameters at full load and at a room temperature of 15°C (Point C)</b>				
Nominal cooling capacity		$P_C$	<b>x</b>	kW
Nominal absorbed power		$D_C$	<b>x</b>	kW
<b>Declared COP</b>		<b><math>COP_C</math></b>	<b>x</b>	
<b>Parameters at full load and at a room temperature of 5°C (Point D)</b>				
Nominal cooling capacity		$P_D$	<b>x</b>	kW
Nominal absorbed power		$D_A$	<b>x</b>	kW
<b>Declared COP</b>		<b><math>COP_D</math></b>	<b>x</b>	
<b>Parameters at full load and at a room temperature of 43°C</b>				
Nominal cooling capacity		$P_3$	<b>0,54</b>	kW
Nominal absorbed power		$D_3$	<b>0,65</b>	kW
<b>Declared COP</b>		<b><math>COP_3</math></b>	<b>0,83</b>	
Control of capacity	<i>fixed</i>			
Degradation coefficient of the units with a fixed and progressive capacity		$Cdc$	<b>0,25</b>	
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Model	<b>FREEBLOCK - FB 13N</b>			
Refrigerating Fluid	<b>R404A</b>			
	Element	Symbol	Value	Unit
<b>Evaporation temperature</b>		$t$	<b>-35°C</b>	°C
<b>Annual consumption of electrical energy</b>		$Q$	<b>x</b>	kWh/a
<b>Seasonal energy efficiency ratio</b>		$SEPR$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 32°C (Point A)</b>				
Nominal cooling capacity		$P_A$	<b>0,87</b>	kW
Nominal absorbed power		$D_A$	<b>0,85</b>	kW
<b>Nominal COP</b>		<b><math>COP_A</math></b>	<b>1,02</b>	
<b>Parameters at full load and at a room temperature of 25°C (Point B)</b>				
Nominal cooling capacity		$P_B$	<b>0,96</b>	kW
Nominal absorbed power		$D_B$	<b>0,86</b>	kW
<b>Declared COP</b>		<b><math>COP_B</math></b>	<b>1,11</b>	
<b>Parameters at full load and at a room temperature of 15°C (Point C)</b>				
Nominal cooling capacity		$P_C$	<b>x</b>	kW
Nominal absorbed power		$D_C$	<b>x</b>	kW
<b>Declared COP</b>		<b><math>COP_C</math></b>	<b>x</b>	
<b>Parameters at full load and at a room temperature of 5°C (Point D)</b>				
Nominal cooling capacity		$P_D$	<b>x</b>	kW
Nominal absorbed power		$D_A$	<b>x</b>	kW
<b>Declared COP</b>		<b><math>COP_D</math></b>	<b>x</b>	
<b>Parameters at full load and at a room temperature of 43°C</b>				
Nominal cooling capacity		$P_3$	<b>0,74</b>	kW
Nominal absorbed power		$D_3$	<b>0,81</b>	kW
<b>Declared COP</b>		<b><math>COP_3</math></b>	<b>0,91</b>	
Control of capacity	<i>fixed</i>			
Degradation coefficient of the units with a fixed and progressive capacity		$Cdc$	<b>0,25</b>	
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Model	<b>FREEBLOCK - FB 20N</b>			
Refrigerating Fluid	<b>R404A</b>			
	Element	Symbol	Value	Unit
<b>Evaporation temperature</b>		$t$	<b>-35°C</b>	°C
<b>Annual consumption of electrical energy</b>		$Q$	<b>x</b>	kWh/a
<b>Seasonal energy efficiency ratio</b>		$SEPR$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 32°C (Point A)</b>				
Nominal cooling capacity		$P_A$	<b>1,21</b>	kW
Nominal absorbed power		$D_A$	<b>1,28</b>	kW
<b>Nominal COP</b>		<b><math>COP_A</math></b>	<b>0,95</b>	
<b>Parameters at full load and at a room temperature of 25°C (Point B)</b>				
Nominal cooling capacity		$P_B$	<b>1,44</b>	kW
Nominal absorbed power		$D_B$	<b>1,32</b>	kW
<b>Declared COP</b>		<b><math>COP_B</math></b>	<b>1,09</b>	
<b>Parameters at full load and at a room temperature of 15°C (Point C)</b>				
Nominal cooling capacity		$P_C$	<b>x</b>	kW
Nominal absorbed power		$D_C$	<b>x</b>	kW
<b>Declared COP</b>		<b><math>COP_C</math></b>	<b>x</b>	
<b>Parameters at full load and at a room temperature of 5°C (Point D)</b>				
Nominal cooling capacity		$P_D$	<b>x</b>	kW
Nominal absorbed power		$D_A$	<b>x</b>	kW
<b>Declared COP</b>		<b><math>COP_D</math></b>	<b>x</b>	
<b>Parameters at full load and at a room temperature of 43°C</b>				
Nominal cooling capacity		$P_3$	<b>0,86</b>	kW
Nominal absorbed power		$D_3$	<b>1,20</b>	kW
<b>Declared COP</b>		<b><math>COP_3</math></b>	<b>0,72</b>	
Control of capacity	<i>fixed</i>			
Degradation coefficient of the units with a fixed and progressive capacity		$Cdc$	<b>0,25</b>	
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Model	<b>FREEBLOCK - FB 28N</b>			
Refrigerating Fluid	<b>R404A</b>			
	Element	Symbol	Value	Unit
<b>Evaporation temperature</b>		$t$	<b>-35°C</b>	°C
<b>Annual consumption of electrical energy</b>		$Q$	<b>x</b>	kWh/a
<b>Seasonal energy efficiency ratio</b>		$SEPR$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 32°C (Point A)</b>				
Nominal cooling capacity		$P_A$	<b>1,56</b>	kW
Nominal absorbed power		$D_A$	<b>1,57</b>	kW
<b>Nominal COP</b>		$COP_A$	<b>0,99</b>	
<b>Parameters at full load and at a room temperature of 25°C (Point B)</b>				
Nominal cooling capacity		$P_B$	<b>1,85</b>	kW
Nominal absorbed power		$D_B$	<b>1,60</b>	kW
<b>Declared COP</b>		$COP_B$	<b>1,16</b>	
<b>Parameters at full load and at a room temperature of 15°C (Point C)</b>				
Nominal cooling capacity		$P_C$	<b>x</b>	kW
Nominal absorbed power		$D_C$	<b>x</b>	kW
<b>Declared COP</b>		$COP_C$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 5°C (Point D)</b>				
Nominal cooling capacity		$P_D$	<b>x</b>	kW
Nominal absorbed power		$D_A$	<b>x</b>	kW
<b>Declared COP</b>		$COP_D$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 43°C</b>				
Nominal cooling capacity		$P_3$	<b>1,13</b>	kW
Nominal absorbed power		$D_3$	<b>1,49</b>	kW
<b>Declared COP</b>		$COP_3$	<b>0,76</b>	
Control of capacity		<i>fixed</i>		
Degradation coefficient of the units with a fixed and progressive capacity		$Cdc$	<b>0,25</b>	
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Model	<b>FREEBLOCK - FB 55N</b>			
Refrigerating Fluid	<b>R404A</b>			
	Element	Symbol	Value	Unit
<b>Evaporation temperature</b>		$t$	<b>-35°C</b>	°C
<b>Annual consumption of electrical energy</b>		$Q$	<b>x</b>	kWh/a
<b>Seasonal energy efficiency ratio</b>		$SEPR$	<b>1,58</b>	
<b>Parameters at full load and at a room temperature of 32°C (Point A)</b>				
Nominal cooling capacity		$P_A$	<b>2,52</b>	kW
Nominal absorbed power		$D_A$	<b>2,31</b>	kW
<b>Nominal COP</b>		$COP_A$	<b>1,09</b>	
<b>Parameters at full load and at a room temperature of 25°C (Point B)</b>				
Nominal cooling capacity		$P_B$	<b>2,72</b>	kW
Nominal absorbed power		$D_B$	<b>2,09</b>	kW
<b>Declared COP</b>		$COP_B$	<b>1,30</b>	
<b>Parameters at full load and at a room temperature of 15°C (Point C)</b>				
Nominal cooling capacity		$P_C$	<b>2,98</b>	kW
Nominal absorbed power		$D_C$	<b>1,83</b>	kW
<b>Declared COP</b>		$COP_C$	<b>1,63</b>	
<b>Parameters at full load and at a room temperature of 5°C (Point D)</b>				
Nominal cooling capacity		$P_D$	<b>3,22</b>	kW
Nominal absorbed power		$D_A$	<b>1,62</b>	kW
<b>Declared COP</b>		$COP_D$	<b>1,99</b>	
<b>Parameters at full load and at a room temperature of 43°C</b>				
Nominal cooling capacity		$P_3$	<b>2,16</b>	kW
Nominal absorbed power		$D_3$	<b>2,70</b>	kW
<b>Declared COP</b>		$COP_3$	<b>0,80</b>	
Control of capacity		<i>fixed</i>		
Degradation coefficient of the units with a fixed and progressive capacity		$Cdc$	<b>0,25</b>	
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Model	<b>FREEBLOCK - FB 80N</b>			
Refrigerating Fluid	<b>R404A</b>			
	Element	Symbol	Value	Unit
<b>Evaporation temperature</b>		$t$	<b>-35°C</b>	°C
<b>Annual consumption of electrical energy</b>		$Q$	<b>x</b>	kWh/a
<b>Seasonal energy efficiency ratio</b>		$SEPR$	<b>1,65</b>	
<b>Parameters at full load and at a room temperature of 32°C (Point A)</b>				
Nominal cooling capacity		$P_A$	<b>3,51</b>	kW
Nominal absorbed power		$D_A$	<b>3,22</b>	kW
<b>Nominal COP</b>		$COP_A$	<b>1,09</b>	
<b>Parameters at full load and at a room temperature of 25°C (Point B)</b>				
Nominal cooling capacity		$P_B$	<b>3,82</b>	kW
Nominal absorbed power		$D_B$	<b>2,89</b>	kW
<b>Declared COP</b>		$COP_B$	<b>1,32</b>	
<b>Parameters at full load and at a room temperature of 15°C (Point C)</b>				
Nominal cooling capacity		$P_C$	<b>4,24</b>	kW
Nominal absorbed power		$D_C$	<b>2,49</b>	kW
<b>Declared COP</b>		$COP_C$	<b>1,70</b>	
<b>Parameters at full load and at a room temperature of 5°C (Point D)</b>				
Nominal cooling capacity		$P_D$	<b>4,63</b>	kW
Nominal absorbed power		$D_A$	<b>2,16</b>	kW
<b>Declared COP</b>		$COP_D$	<b>2,14</b>	
<b>Parameters at full load and at a room temperature of 43°C</b>				
Nominal cooling capacity		$P_3$	<b>3,00</b>	kW
Nominal absorbed power		$D_3$	<b>3,85</b>	kW
<b>Declared COP</b>		$COP_3$	<b>0,78</b>	
Control of capacity		<i>fixed</i>		
Degradation coefficient of the units with a fixed and progressive capacity		$Cdc$	<b>0,25</b>	
EPTA S.p.A. Unità Locale Via delle Monachelle Vecchia, 7 00071 - Pomezia (RM) - Italia				



Model	<b>FREEBLOCK - FB SLIM 6N</b>			
Refrigerating Fluid	<b>R404A</b>			
	Element	Symbol	Value	Unit
<b>Evaporation temperature</b>		$t$	<b>-35°C</b>	°C
<b>Annual consumption of electrical energy</b>		$Q$	<b>x</b>	kWh/a
<b>Seasonal energy efficiency ratio</b>		$SEPR$	<b>x</b>	
<b>Parameters at full load and at a room temperature of 32°C (Point A)</b>				
Nominal cooling capacity		$P_A$	<b>0,66</b>	kW
Nominal absorbed power		$D_A$	<b>0,67</b>	kW
<b>Nominal COP</b>		<b><math>COP_A</math></b>	<b>0,98</b>	
<b>Parameters at full load and at a room temperature of 25°C (Point B)</b>				
Nominal cooling capacity		$P_B$	<b>0,73</b>	kW
Nominal absorbed power		$D_B$	<b>0,67</b>	kW
<b>Declared COP</b>		<b><math>COP_B</math></b>	<b>1,08</b>	
<b>Parameters at full load and at a room temperature of 15°C (Point C)</b>				
Nominal cooling capacity		$P_C$	<b>x</b>	kW
Nominal absorbed power		$D_C$	<b>x</b>	kW
<b>Declared COP</b>		<b><math>COP_C</math></b>	<b>x</b>	
<b>Parameters at full load and at a room temperature of 5°C (Point D)</b>				
Nominal cooling capacity		$P_D$	<b>x</b>	kW
Nominal absorbed power		$D_A$	<b>x</b>	kW
<b>Declared COP</b>		<b><math>COP_D</math></b>	<b>x</b>	
<b>Parameters at full load and at a room temperature of 43°C</b>				
Nominal cooling capacity		$P_3$	<b>0,56</b>	kW
Nominal absorbed power		$D_3$	<b>0,66</b>	kW
<b>Declared COP</b>		<b><math>COP_3</math></b>	<b>0,85</b>	
Control of capacity	<i>fixed</i>			
Degradation coefficient of the units with a fixed and progressive capacity		$Cdc$	<b>0,25</b>	
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