HAMBURG SÜD FRUIT SEASON 2019
Service options from Rio de la Plata to USA
Fruit Season to the USA 2019

Stay cool – we care

Refrigerated cargo (reefer cargo) is one of the most important commodity groups carried on Hamburg Süd vessels. Due to its perishable nature, special procedures are in place to handle this cargo, from packing plant to final destination.

With long experience in the transport of perishable cargo, Hamburg Süd ranks among the top five reefer container carriers worldwide. Together with the renowned Aliança brand as a Brazilian flag carrier, the Hamburg Süd Group stands for the highest schedule reliability and shortest transit times.

Chilled products

The significant difference between chilled and frozen reefer cargo is that when stuffing chilled products such as fruit the refrigerated air must be circulated through the entire load. This is because heat in the reefer container is not generated just from the outside, but may also be produced by the cargo itself. The respiration process of fruit and vegetables, for example, requires air circulation both around the commodity and through the load to remove respiratory heat, water vapour and gases such as carbon dioxide and ethylene.

Correct cargo packaging is essential in maintaining product quality during transportation and marketing. In addition to protection, packaging in the form of bins, boxes, crates, etc. serves to enclose the product and provide the means of handling.

The packaging must withstand:

- rough handling (stuffing and unstuffing)
- compression from the accumulated weight of stacked packages
- impact and vibration during transport
- high humidity during pre-cooling, transit and storage

The most commonly used types of packaging are cartons, crated boxes and bags. The material used for this packaging depends on the product, packing method, pre-cooling method, strength and buyer’s specification.

Cartons for fresh fruit and vegetables require airflow holes in the top and bottom so that when stacked they align with adjacent cartons. The number, placement, size and shape of the air holes are determined by the product being packaged. Wax-impregnated cardboard or other materials that will not lose strength in high-humidity environments are to be applied. The strength of a carton is its corners. Stacking cartons directly on top of each other is recommended to minimise crushing of the cartons below.

If loading cargo on pallets, the cartons on the pallets should be placed so that air flows up into the cartons unrestricted. The corners of each carton should be supported directly by the pallet, and if pallets are wrapped in plastic to provide stability, the bottom and top of the pallet/cartons must not be covered.
**Integrated reefer containers**

Hamburg Süd has a large fleet of modern integrated reefer containers (reefers) with cooling facilities built into the container. They come in 20’ and 40’ sizes and are available on all our trade routes. The integrated container is especially suitable for door-to-door transport. Only electrical power is required.

Hamburg Süd’s reefer containers are built to the highest possible technical standards. As a result, our equipment is regarded by the industry as state-of-the-art. The design reflects a combination of long experience, extensive research and testing programmes.

**Pre-Trip Inspection (PTI) and container check**

It is one of the highest priorities of Hamburg Süd to provide our customers with the most suitable container equipment for their needs at any time. Before one of our reefer containers is released to a customer, it must always pass through a Pre-Trip Inspection (PTI).

The Hamburg Süd PTI is a long and extensive check of the container and the operation of the reefer machinery. This ensures that only clean and undamaged containers with reefer machinery in perfect running order are made available to our customers.

### Main technical features:

- Service temperature range -30 °C to +30 °C
- Magnum® -35 °C to +30 °C
- Fresh air exchange adjustable (0 to 285 cbm/h)
- Dehumidification range 50% to 95% maximum relative humidity
- Operating voltage 360 to 500 Volt / 50 to 60 Hertz
- Unsurpassed internal volume to provide maximum cargo space
- High-tech, CFC-free insulation ensures minimum heat leakage
- Special “T-bar” floors to ensure optimum air circulation
- Temperature control through built-in microprocessor
- High-quality cooling machinery
- The use of environmentally friendly refrigerants

### Equipment Specifications

<table>
<thead>
<tr>
<th>Size</th>
<th>20’ x 8’ x 8’6”</th>
<th>20’ x 8’ x 8’6”</th>
<th>40’ x 8’ x 9’6”</th>
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<tr>
<td>ISO-Code</td>
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<td>22R1</td>
<td>45R1</td>
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<tr>
<td>Equipment-Type</td>
<td>RF</td>
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<td>RH</td>
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<tr>
<td></td>
<td>Integrated Reefer Container</td>
<td>Integrated Reefer Hanging Cargo</td>
<td>Integrated Reefer High Cube Container</td>
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<tr>
<td>Interior Dimensions</td>
<td>(Length, Width, Height)</td>
<td>(Length, Width, Height)</td>
<td>(Length, Width, Height)</td>
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<tr>
<td></td>
<td>5,558 mm (L)</td>
<td>5,458 mm (L)</td>
<td>11,582 – 11,651 mm (L)</td>
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<tr>
<td></td>
<td>2,300 mm (W)</td>
<td>2,294 mm (W)</td>
<td>2,296 – 2,310 mm (W)</td>
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<td></td>
<td>2,324 mm (H)</td>
<td>2,291 mm (H)</td>
<td>2,552 – 2,607 mm (H)</td>
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<tr>
<td>Door Opening</td>
<td>(Width, Height)</td>
<td>(Width, Height)</td>
<td>(Width, Height)</td>
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<tr>
<td></td>
<td>2,296 mm (W)</td>
<td>2,296 mm (W)</td>
<td>2,288 – 2,310 mm (W)</td>
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<td></td>
<td>2,290 mm (H)</td>
<td>2,290 mm (H)</td>
<td>2,490 – 2,576 mm (H)</td>
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<tr>
<td>Weights Gross</td>
<td>30,480 kg</td>
<td>30,480 kg</td>
<td>34,800 kg</td>
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<tr>
<td></td>
<td>2,500 kg – 3,050 kg</td>
<td>3,920 kg</td>
<td>4,260 kg – 4,900 kg</td>
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<tr>
<td></td>
<td>27,100 kg – 27,980 kg</td>
<td>26,530 kg</td>
<td>29,900 kg – 30,540 kg</td>
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<tr>
<td>Tare</td>
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<td></td>
</tr>
<tr>
<td>Payload</td>
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<tr>
<td>Volume</td>
<td>30.00 cbm</td>
<td>28.70 cbm</td>
<td>67.5/ 70 cbm</td>
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CITRUS: ALCT III

- 2 vessels offering fixed-day weekly frequency to transhipment port of Santos
- Departing Zarate every Tuesday
- Departing Rosario every Thursday
- Arrival Santos every Tuesday
- Santos to Philadelphia in 18 days

Hamburg Süd service options

Argentinean Feeder  |  SAEX – SAN ANTONIO EXPRESS

SERVICE HIGHLIGHTS

- Seasonal dedicated Patagonia fruit service
- Fast and direct connections between San Antonio Este and Santos
- Efficient vessels with high reefer capacity
- Transit time San Antonio to Philadelphia in 27 days
Hamburg Süd Transit Times

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO</th>
<th>New York</th>
<th>Philadelphia</th>
<th>Norfolk</th>
<th>Charleston</th>
<th>Jacksonville</th>
<th>Port Everglades</th>
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<tr>
<td>Montevideo*</td>
<td>Sat</td>
<td>24</td>
<td>26</td>
<td>28</td>
<td>30</td>
<td>31</td>
<td>33</td>
</tr>
<tr>
<td>Buenos Aires</td>
<td>Mon</td>
<td>22</td>
<td>24</td>
<td>26</td>
<td>28</td>
<td>29</td>
<td>31</td>
</tr>
<tr>
<td>Rio Grande</td>
<td>Wed</td>
<td>20</td>
<td>22</td>
<td>24</td>
<td>26</td>
<td>27</td>
<td>29</td>
</tr>
<tr>
<td>Itapoá</td>
<td>Fri</td>
<td>18</td>
<td>20</td>
<td>22</td>
<td>24</td>
<td>25</td>
<td>27</td>
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<tr>
<td>Santos</td>
<td>Sun</td>
<td>16</td>
<td>18</td>
<td>20</td>
<td>22</td>
<td>23</td>
<td>25</td>
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<tr>
<td>Rio de Janeiro</td>
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<td>16</td>
<td>18</td>
<td>20</td>
<td>21</td>
<td>23</td>
</tr>
<tr>
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<td>11</td>
<td>13</td>
<td>15</td>
<td>17</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Pecém</td>
<td>Mon</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>15</td>
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ARGENTINA
Hamburg Süd Sucursal Argentina
Av. del Libertador 1969
Olivos
B1638 BGF Buenos Aires
Contact: Brian Tossi
Phone: +54 11 5789 9996
Fax: +54 11 5789 9911
E-mail: brian.tossi@hamburgsud.com
bue-citrus-customerservice@hamburgsud.com

URUGUAY
Hamburg Süd Sucursal Uruguay
Misiones 1589
Piso 2 Of. 89
11000 Montevideo
Phone: +598 2 9150050
Fax: +598 2 9160872
E-mail: hamburg@uy.hamburgsud.com

www.hamburgsud-line.com