

## How to assess transportation constraints ?

You're sending a picture to Berlin: should it go by air or road ?  
You're lending a Dubuffet sculpture to a museum in São Paulo :  
should it go by air or sea ?

Between Paris and Sydney, is it better to change planes  
in Frankfurt or Singapore ?

Each transport method - road, air, sea or even rail for small  
hand luggage items - has its advantages and sometimes its  
drawbacks.

The right choice will depend on :

- the type of work and its bulk once packed
- the means of transport existing between the starting point  
and the destination
- the possible routes
- the time you have to complete the operation
- the presence or absence of a courier

Prior assessment of these constraints is vital to avoid  
surprises. In each case, our role is to advise you.

## Road transport

### THE TRUCKER'S PROFESSION IN FRANCE

Transport is a profession that is strictly regulated in France. You must check that the carrier you choose is registered on the carriers register and that the head of the company has a transport licence. If it belongs to a professional association like the FFOCT (Fédération Française des Organisateurs et Commissionnaires en Transport), this will be another sign that the company complies with road transport regulations.



Bear in mind, for instance, that all our HGV drivers have taken the FIMO (Obligatory minimum initial training) course beforehand ; it lasts 156 hours spread over 4 weeks. Furthermore, every five years, they have to take FCOS refresher courses lasting 24 hours and spread over 3 days.

### WHAT IS AN ART TRANSPORT VEHICLE ?

The criteria are obviously not the same if the work transported is a Calder sculpture or an oil painting on wood, but the experts agree that an art transport vehicle should have the following characteristics :

- alarm and circuit-breaker in the truck
- padding and air-ride suspension
- air-conditioning maintaining the temperature between 18 and 20°C
- seat available for the courier (if one is present)
- a GSM telephone and a satellite-based location system
- depending on the assignment, a liftgate and other necessary equipment

It is standard practice in the business to have two drivers. The choice of the type of vehicle depends on the weight and dimensions of the work and its packing.

## USEFUL LOADS AND INTERNAL DIMENSIONS OF SOME TYPICAL TRUCKS

Type	Useful load	Inside length	Inside width	Inside height	Surface area*	Seats
20 cu.	0.85 ton	4.15 meters	1.88 meters	2.17 meters	7.80 sq. m	3
25 cu.	2.00 tons	4.65 meters	2.05 meters	2.43 meters	9.53 sq. m	6
35 cu.	4.91 tons	5.50 meters	2.20 meters	2.49 meters	12.10 sq. m	5
50 cu.	6.76 tons	7.08 meters	2.37 meters	2.83 meters	16.78 sq. m	6
80 cu. (Articulated truck)	10.18 tons	10.50 meters	2.27 meters	3.03 m (2.46 m in the coupling overhang)	23.84 sq. m	2/3

\* SURFACE AREA : in our business, we very rarely stack crates. Thus, the usable surface area inside the vehicle reflects practical usable space rather than total volume.

### LP ART's vehicle fleet in 2005

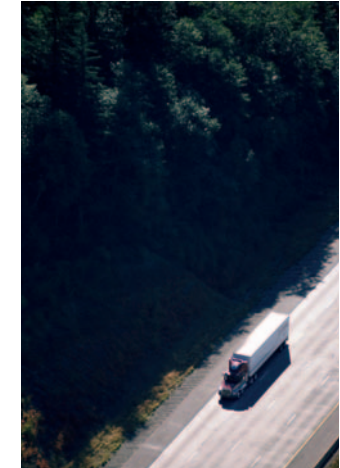
- twenty five art trucks (air conditioned, air-ride suspension, alarm and GPS tracking system) : 30, 35, 25 and 20 cu. m,
- three 20 cu. m padded trucks,
- four crew vans,
- three minivans + air conditioned semi-trailer trucks on hire.

## HOW TO OPTIMIZE ROUTING ?

A work should travel the shortest possible distance.

Having laid down this principle, we have to be ingenious and think ahead, while complying with the regulations. We take the following factors into account :

- naturally, the collection and delivery times specified by the lender or borrower and aircraft departure and arrival times,
- the time spent on site (packing, unpacking, handling), plus the loading and unloading time,
- the distance from a secure location for overnight storage (police station, warehouse protected by an alarm),
- the foreseeable average speed (rarely more than 70 kilometers per hour by road),
- the regulatory driving times as determined by each country,
- traffic and parking regulations in large cities: in particular, it is important to know the times when collections and deliveries can be made,
- the information provided by DOP, LP ART's own computerized dispatching and reservation system,
- the regular routes set up by LP ART.



## DRIVING TIMES AUTHORIZED PER DRIVER

Time groups	Minimum and maximum standards
Continuous driving	4 hours 30 minutes.
Breaks	45 minutes or three 15-minute breaks during the driving period or immediately afterwards.
Daily driving period	9 hours ; 10 hours twice a week.
Weekly driving period	six periods of daily driving, i.e. (9 hours x 4) + (10 hours x 2) = 56 hours. In France, under Article L2.1.7 of the Labour Code, maximum of 48 hours if the entire working period is actually spent driving.





### Traffic, collections and deliveries in Paris

The regulations in Paris are complex. Traffic, stopping and parking are authorized for all vehicles between 9.30 pm and 7.30 am. Outside this night-time period, the time slots authorized during the day depend on the vehicle's surface area on the basis of three thresholds : 12, 16 and 20 square meters. Vehicles with a surface area of less than 20 square meters can apply for authorization to make collections between 4 pm. and 9.30 pm. However, there are systematic waivers for certain categories of activity without any surface area restrictions. In practice, the transportation of works of art is considered as equivalent to funds transfers. We can therefore drive around Paris, collect and deliver at any time.

### HOW TO ORGANIZE AN EXCEPTIONAL TRANSPORT ?

Depending on the load's characteristics, we provide the technical facilities (flatbed truck and crane) and deal with the authorization applications. Abnormal loads are classified in three categories according to the weight, width and length. The routing constraints and accompaniment vary according to the category.



Vehicles less than 25 meters long and 3 meters wide do not require any accompaniment ; otherwise, depending on the case, a pilot car, an accompanying car or a motorcycle escort is required (French circular 75-173 dated 19 November 1975).

### LP ART'S AIR FREIGHT KNOW-HOW

There are many different scheduled commercial airlines. Their destinations, aircraft types, services and freight zone organization methods vary a great deal. How do you find your way around, negotiate and ensure loading on the right flight ? For all these aspects, and especially for freight security, LP ART's know-how is widely acknowledged and appreciated. This service is based on both our staff being permanently on hand at the airport and on a special infrastructure and facilities :

- a permanent office at Roissy and shuttle vehicles,
- an IATA freight agent's licence enabling us to issue air waybills and supervise dispatch directly,
- a customs broker's licence enabling us to carry out all customs operations at the airport, particularly issuing transit bonds for any destination,
- badges giving us access to all areas of the airport,
- Authorized agent certification for freight security, as issued by the DGAC (Direction Générale de l'Aviation Civile - French Civil Aviation Authority). In practical terms, this certification enables us to deliver freight to the airport 4 or 5 hours before the flight is due to leave.



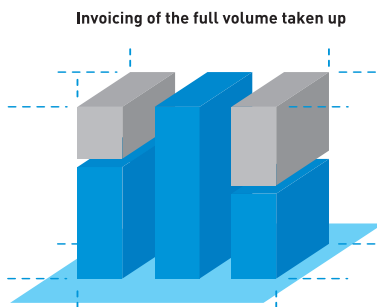
### SOME RECOMMENDATIONS FOR DEALING WITH AIRLINES

- **Reservation** : the rule is never to make a freight reservation before knowing the exact dimensions of the crates. However, it is desirable to make a preliminary reservation for large volumes (more than 10 cu. m). On Air France, for instance, reservations can not be made more than thirteen working days before the flight departure.
- **Type of aircraft and pallets** : aircraft, like trucks, have different capacities. Generally speaking, we only load works of art on palletized flights (i.e. the crates are loaded and secured on to a pallet), after ensuring that the crate dimensions, particularly the height, are acceptable for the aircraft used for the chosen flight. Sometimes, crates are secured inside containers.



- **Flight itinerary** : be careful of stopovers, when your freight can be accidentally unloaded. A direct flight may actually involve several stopovers. Non-stop flights are preferable.
- **Departure and arrival times** : cargo flights no longer have precise takeoff and landing times. If a flight is delayed, all necessary steps must be taken to ensure the security of the work under customs authority.
- **Delivery deadlines for departure** : bear in mind that, depending on the airline and the airport, you may be required to deliver the freight up to twenty-four hours in advance, unless you have authorized agent status.
- **Collection deadlines on arrival** : the LP ART team at Roissy generally makes sure that you recover your crates in two hours. However, this represents exceptional treatment; ordinarily, airlines do not endeavor to make your freight available within less than 24 hours.
- **Hand luggage** : remember that the captain of the aircraft is in sole command and, on safety grounds, he has the right to refuse your hand luggage because of its size or contents (even if you have reserved and paid for an extra seat). The rule is that the three dimensions of an item of hand luggage must not measure more than 1.15 meters in total. However, surprises are by no means rare at departure time. You should inform the airline of the size of your handcarry when you book. Also bear in mind that all hand luggage must now be checked: either using X-rays, or visually. Hand luggage is opened much more frequently than in the past.
- **The escort** : couriers can travel on some cargo planes but the number of seats is limited (usually no more than three). Bear in mind, for instance, that a person accompanying a live animal will have priority over you and your work of art.

→ **The price** : airlines used to charge by the kilogram (weight-cubic capacity or actual weight). However, nowadays, especially for large consignments, charges are calculated on the basis of the « position » occupied, in other words by the pallet and according to the pallet type. If you're not in a hurry and the exact routing of your consignment is unimportant, you can use the services of air consolidated companies offering unbeatable prices... but with no real possibility of recourse if there is a problem.



## AIR FREIGHT LOADING CHARACTERISTICS ACCORDING TO THE TYPE OF AIRCRAFT

Aircraft model	Maximum height*	Type of loading
<b>Fokker 28</b>	Hold : 55 cm	Bulk
<b>DC 8 Cargo</b>	Main deck : 208 cm Hold : 160 cm	Ten-foot pallets and containers Bulk
<b>Airbus 300 or 310 Passenger</b>	Hold : 163 cm	Ten-foot pallets and containers
<b>Airbus 320 or 321 Passenger</b>	Hold : 114 cm	PKC extension pallets and AKH containers
<b>Airbus 340 Passenger</b>	Hold : 163 cm	Ten-foot pallets and containers
<b>Boeing 737 Passenger</b>	Hold : 86 cm	Bulk
<b>Boeing 737 Cargo</b>	Main deck : 208 cm Hold : 86 cm	Ten-foot pallets and containers Bulk
<b>Boeing 747 Passenger</b>	Hold : 163 cm	Ten-foot pallets and containers
<b>Boeing 747 Cargo</b>	Main deck : - nose : 244 cm - side door : 300 cm Hold : 163 cm	Ten and twenty-foot pallets and B747 Cargo pallets Ten-foot pallets and containers
<b>Boeing 747 Combined</b>	Main deck : 300 cm Hold : 163 cm	Ten and twenty-foot pallets Ten-foot pallets and containers
<b>Boeing 767 Passenger</b>	Hold : 163 cm	Ten-foot pallets and containers
<b>Boeing 777 Passenger</b>	Hold : 163 cm	Ten-foot pallets and containers

\* These heights are indications and may vary slightly from one airline to another.

**Note** : although airlines undertake to have pressurized holds at a moderate temperature, the temperature can fall below 10°C.



### WHAT YOU NEED TO KNOW ABOUT PALLETIZATION

Palletization refers to loading on a pallet (open) or in a container (closed).

Palletization, which we supervise systematically in the airport freight area, consists of placing one or more crates on a metal base (previously insulated with plastic film) and attaching them firmly (under another plastic film)

using netting secured to the pallet with hooks. There is a wide range of pallets and containers of different sizes depending on the special uses they are designed for. Each type is designated by an international code name.

Depending on the aircraft model and type (passenger, cargo or combined), the freight is loaded on types of pallets and containers compatible with the dimensions and shape of the aircraft fuselage. According to the freight to be loaded, the airline chooses the types of pallets and containers and allocates them positions in the hold (and on the main deck in cargo planes).

To keep things simple, the most common pallets are ten-foot pallets (ten feet or 318 cm long), with widths of 153, 224 and 244 cm.

Containers are also ten feet long, or half, i.e. 156 cm ; the widths are also 153, 224 and 244 cm. Ninety-five percent of goods sent to Europe travel in containers.

The maximum loading heights correspond to the height of the holds in which the pallets and containers are loaded.

**Careful : the maximum loading heights vary according to the type of pallet and aircraft.**

### DIMENSIONS OF COMMON PALLETES AND CONTAINERS

Type	Typical code	Dimensions*
<b>Standard pallet</b>	P1P	318 x 224 cm
<b>Ten-foot pallet</b>	P6P	318 x 244 cm
<b>Twenty-foot pallet</b>	P7E	606 x 244 cm
<b>Extension pallet</b>	PLW/PLA PAW PMW	318 x 153 cm 318 x 224 cm 318 x 244 cm
<b>A320/A321 pallet</b>	PKC	156 x 153 cm
<b>B747 Cargo pallet</b>	PAG PMC PZA PGF	317 x 223 (height : 243 or 299 cm) 317 x 243 (height : 243 or 299 cm) 497 x 243 (height : 243 or 299 cm) 605 x 243 (height : 243 or 299 cm)
<b>Standard container</b>	LD3/AVE LD7/AAK AMF	156 x 153 cm (height : 163 cm) 318 x 224 cm (height : 163 cm) 318 x 244 cm (height : 163 cm)
<b>A320/A310 container</b>	AKH	156 x 153 cm (height : 109 cm)

\* These heights are indications and may vary slightly from one airline to another.

### HOW IS SECURITY ORGANIZED FOR AIR FREIGHT ?

As an authorized agent holding certification from the DGAC, LP ART ensures the safety of each item dispatched under the terms of the provisions set out in its safety program. The item dispatched is accompanied by its detailed description and its security certificate. On receipt of the item, it is checked in the following way: conformity of the contents with the detailed description, good overall condition of the packaging, authenticity of the safety certificate (i.e. the fact that it has been made out by a certified company or organization). The persons carrying out these checks receive special training, especially the agents in charge of special checks, who take refresher courses every three months.

# Sea transport



## FOR HEAVY, NON-FRAGILE ITEMS

Sea transport is undoubtedly the most economic transport method for heavy, non-fragile items.

However, we limit its use for the following reasons :

- the length of the voyage (for example at least twenty days from Le Havre to Tokyo),
- route and time of arrival difficult to confirm to the nearest 48 hours,
- rough mechanical handling of containers,
- impossible to supervise loading and unloading,
- relative lack of security in ports,
- open top containers are placed on deck and hence exposed to bad weather.

## SHIPPING CONTAINER DIMENSIONS

Type	20' DRY	20' OT	20' FLAT	40' DRY	40' OT	40' FLAT
Length	5.919 m	5.919 m	5.935 m	12.056 m	12.043 m	12.066 m
Width	2.340 m	2.340 m	2.398 m	2.345 m	2.338 m	2.420 m
Height	2.376 m	2.286 m*	2.327 m*	2.378 m	2.272 m*	2.103 m*
Useful load	22.1 tons	21.8 tons	21.4 tons	27.3 tons	26.0 tons	38.9 tons

\* Can be exceeded with the company's agreement.

**Dry** = closed container.

**OT (Open Top)** = open top, i.e. a tarp-covered container that can be loaded from above.

**Flat** = ordinary platform (for works that cannot be loaded in a container).

# Rail transport

## WHEN SHOULD THE TRAIN BE CHOSEN ?

High-speed trains (such as TGV in France or Shinkansen in Japan) are a practical, quick way of taking a handcarried shipment from one city center to another (provided that both the lender and the insurance company agree, because of the constant stops and transfers involved in rail travel).





## WHAT IS THE COURIER'S JOB ?

Couriering is frequently demanded by lenders concerned about transport security for the works lent.

The courier, representing the lender, travels with the works and is fully empowered to take action to protect them during the trip until they are officially delivered to the borrower.

The courier must therefore be familiar with the condition of the works and the special precautions that must be taken, the packing and handling methods as well as the transport procedures.

The request for a courier is made in writing at the same time as the lending approval and it must set out the lender's specific requirements.

The carrier advances all escorting expenses included in the estimate to the borrower.

(For further details on couriering, see the chapter Assistance to the courier.)

Length		Longueur	
<b>1 inch</b>	= 2,54 cm	<b>1 cm</b>	= 0.3937 inch
<b>1 foot</b> (= 12 inches)	= 30,48 cm	<b>1 m</b>	= 39.37 inches (= 3.2808 feet)
<b>1 yard</b> (= 3 feet or 36 inches)	= 91,44 cm	<b>1 m</b>	= 1.0936 yards
<b>1 mile</b>	= 1609,3 m	<b>1 km</b>	= 0.62137 mile
Area		Surface	
<b>1 square inch</b>	= 6,4516 cm <sup>2</sup>	<b>1 sq. cm</b>	= 0.155 sq. in
<b>1 square foot</b>	= 0,093 m <sup>2</sup>	<b>1 sq. m</b>	= 10.7636 sq. ft
<b>1 square yard</b>	= 0,83613 m <sup>2</sup>	<b>1 sq. m</b>	= 1.196 sq. yd
<b>1 acre</b>	= 0,405 hectare	<b>1 hectare</b>	= 2.471 acres
<b>1 square mile</b>	= 2,59 km <sup>2</sup>	<b>1 sq. km</b>	= 0.38608 sq. mi
Capacity		Capacité	
<b>1 fluid ounce (US)</b>	= 0,02957 liter	<b>1 litre</b>	= 33.8 fluid ounce (US)
<b>1 pint (GB)</b>	= 0,5683 liter	<b>1 litre</b>	= 1.76 pints (GB)
<b>1 gallon (US)</b>	= 3,7854 liters	<b>1 litre</b>	= 0.264 gallon (US)
Volume		Volume	
<b>1 cubic inch</b>	= 16,3871 cm <sup>3</sup>	<b>1 cc</b>	= 0.061 cb. in
<b>1 cubic foot</b>	= 0,028317 m <sup>3</sup>	<b>1 cu. m</b>	= 35.3134 cu. ft
Weight		Poids	
<b>1 pound</b>	= 0,454 kilogramme	<b>1 kilogramme</b>	= 2,203 pounds