

Understanding the Principles of Live Animal Container Design and the Guidelines for Evaluating Animal Container Density

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Key Container Requirement principles

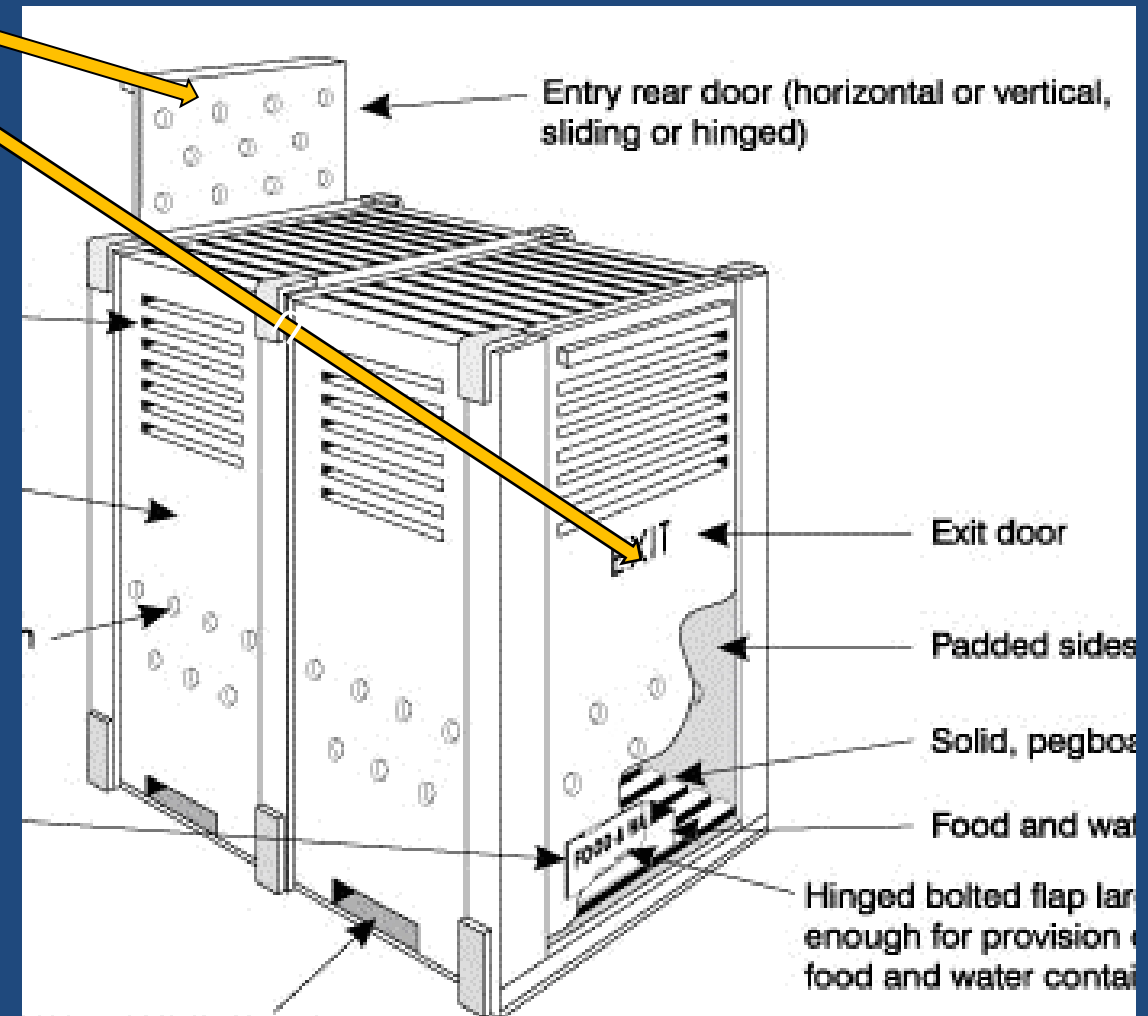
- The appropriate container requirement (CR) for individual species must be consulted.
- The scientific or common name of the animal can be found in Chapter 6, the blue pages, which refer you to the correct CR in Chapter 8.3, the yellow pages.
- Certain species may require reinforced containers due to size and weight while others may need lined or metal containers due to their destructive capabilities.
- The container requirement will be relevant to the species concerned and the principles of design must be adhered to for that species.
- Some species may require double packing to ensure containment (e.g., injurious species, venomous/poisonous).

It should be noted that the illustrations shown in the Container Requirements are examples only. Containers that conform to the principle of written standards for the species but look slightly different will still be considered compliant with the LAR minimum standards. (From the IATA Live Animal Regulations (LAR))



Key Container Requirement principles

- Safe, solid container with secure door to hold animal, prevent damage, escape, unauthorized access, or injury to animal.



Key Container Requirement principles

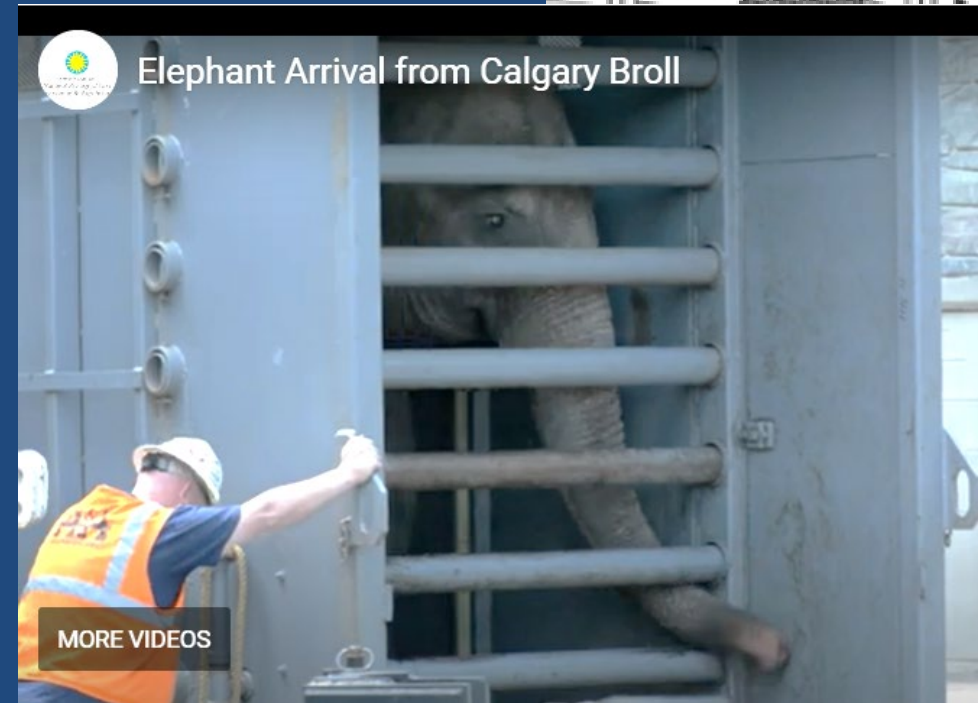
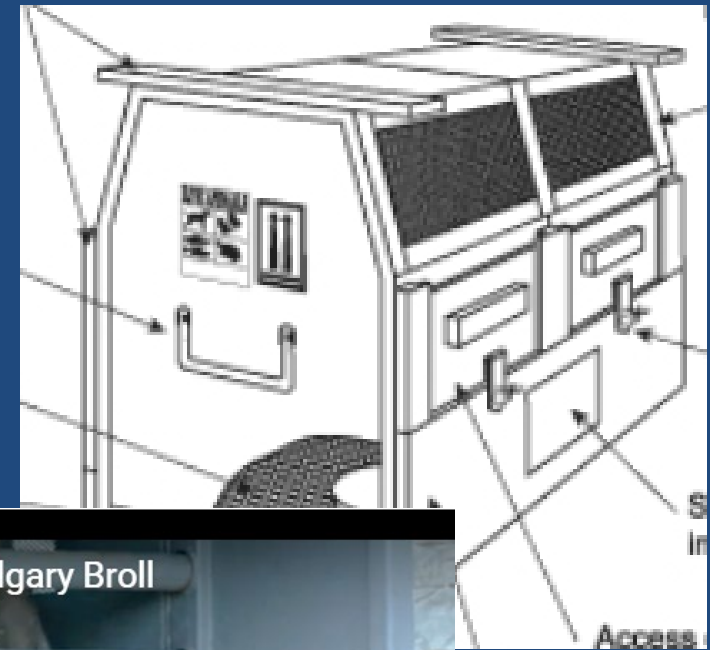
- Spacer bars for carrying and to prevent ventilation blockage.
- Can also include forklift spacers under container.



Key Container Requirement principles

Adequate ventilation

- Container must be adequately ventilated on two or three sides, with majority of the ventilation on the upper side walls of the container.
- Ventilation requirements may vary for shipment of one or two or more animals in same container.
- Ventilation apertures must be small enough to prevent the protrusion of any part of the animal.
- Ventilation should be balanced with temperature considerations.
- There may be variations for species/taxa (e.g., elephants).



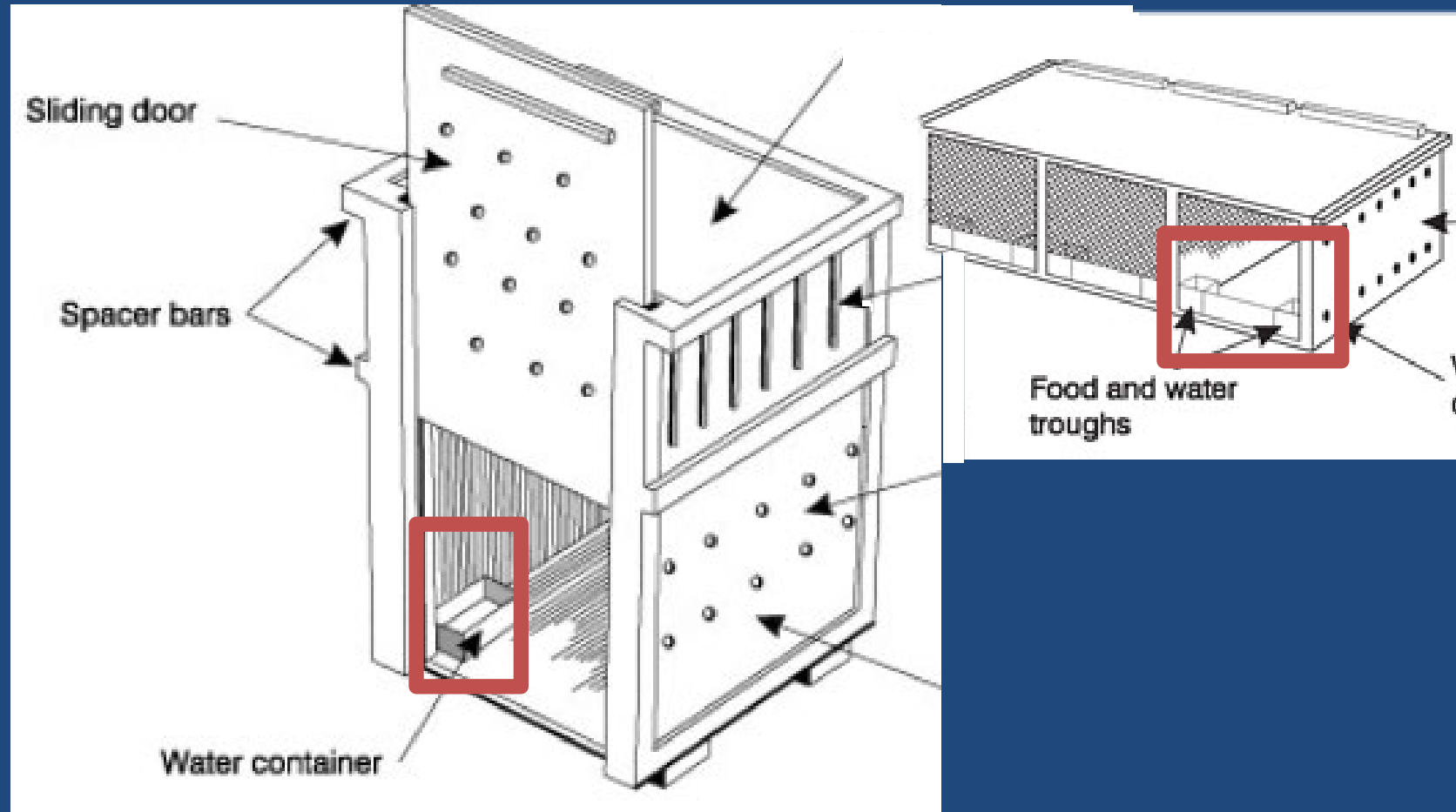
Smithsonian National Zoo



Key Container Requirement principles

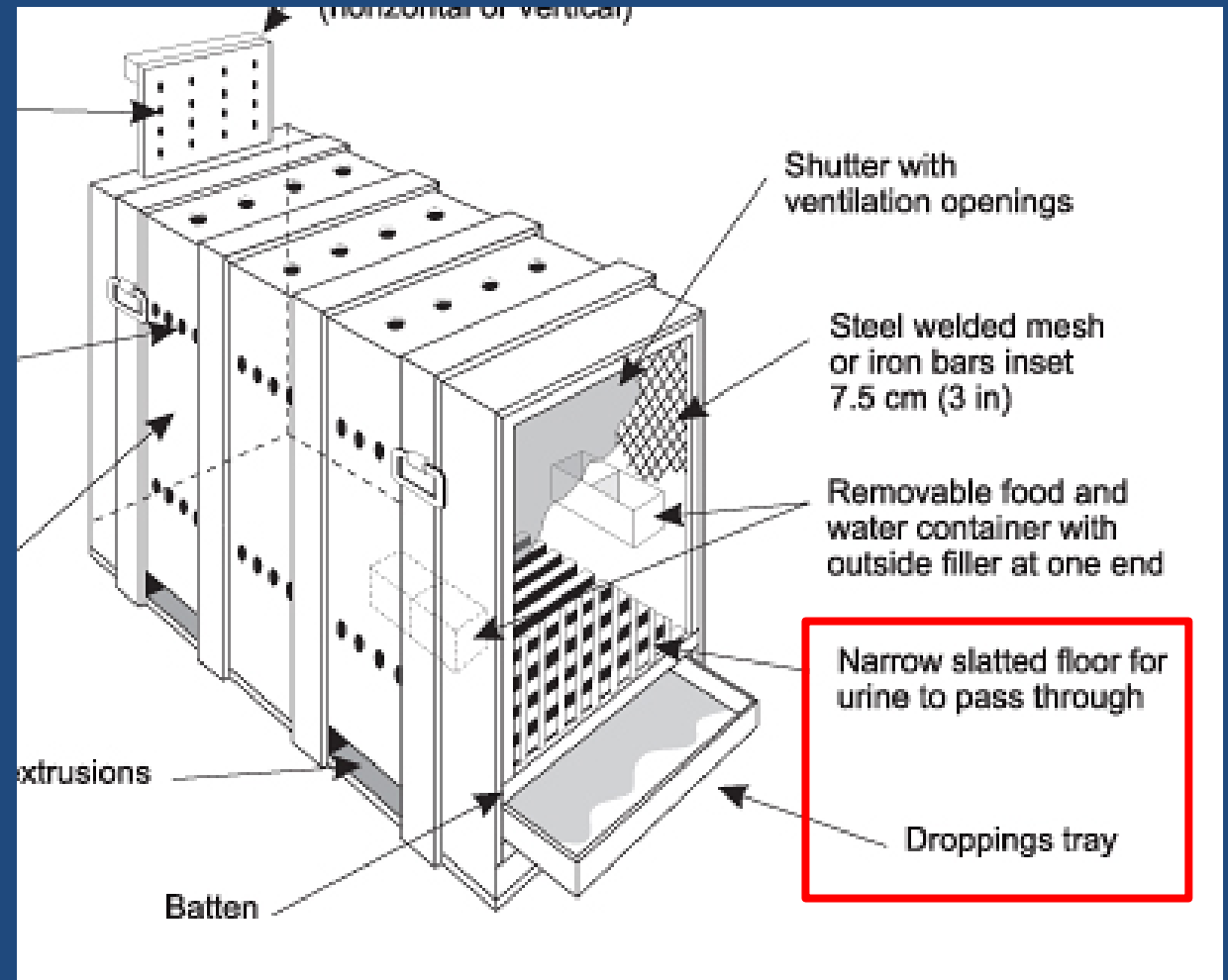
• Water and food containers

- Must be provided, either fixed inside the container or attached to it with a means of access provided, in case of undue delays during the journey.
- Food/water containers must prevent injury.
- Instructions should be provided for feeding and watering.
- If food is required, it must be provided by the shipper.
- When food is forwarded with the consignment the shipper is responsible for ensuring that it does not contravene any regulations of the country or countries of transit or importation.



Key Container Requirement principles

- Absorbent floor covering or slatted floor.
- Ensure that bedding material does not contravene any regulations of the country or countries of transit or importation.



Key Container Requirement principles

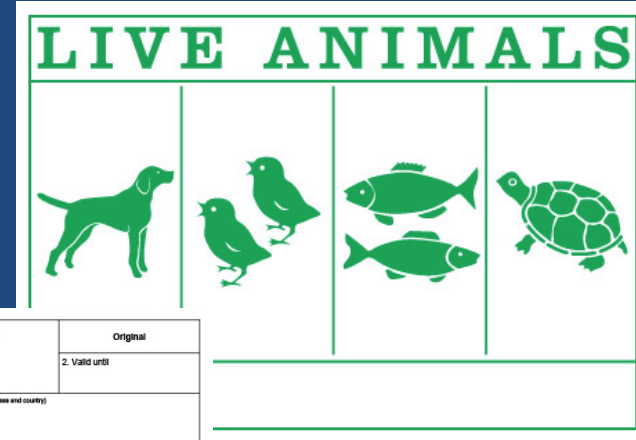
Space

- Container dimensions must be related to the actual size of the animal for which the container is constructed and also reflect the ventilation and welfare requirements for the species.
- Animal must be allowed normal unrestricted basic movement.
 - Must be able to stand, sit comfortably, and, for some species, to turn around

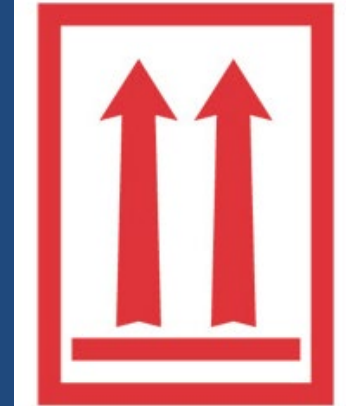


Key Container Requirement principles

- Appropriate labeling and documentation as well as emergency contact information, special instructions, contact numbers, permits, vaccination records



CITES CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA		PERMIT/CERTIFICATE No.		Original	
		<input type="checkbox"/> EXPORT <input type="checkbox"/> RE-EXPORT <input type="checkbox"/> IMPORT <input type="checkbox"/> OTHER:		2. Valid until	
3. Importer (name and address)		4. Exporter-exporter (name, address and country)			
3a. Country of import		Signature of the applicant			
5. Special conditions		6. Name, address, national ownership and country of Management Authority			
If for live animals, this permit or certificate is valid only if the transport conditions comply with the IATA Live Animals Regulations, if for sea plants, with the IATA Perishable Cargo Regulations, or, in the case of non-air transport, with the CITEO Guidelines for the Non-air Transport of Live Wild Animals and Plants					
7a. Scientific name (genus and species) and common name of animal or plant	8. Description of specimens, including identifying marks or numbers (signature if any)	10. Appendix no. and source (see reverse)	11. Quantity (including unit)	11a. Total export/Quota	
7b. Country of origin *	9. Permit no. Date	12a. Country of last re-export	12b. Certificate no. Date	12c. No. of the operation ** or date of acquisition ***	
A					
B					
C					
D					
* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated (only in case of re-export) ** Only for specimens of Appendix species bred in captivity or artificially propagated for commercial purposes *** For pre-Convention specimens					
13. This permit/certificate is issued by					
Place Date Security stamp, signature and official seal					
14. Export endorsement: 15. Bill of Lading/voyage number:					
Block	Quantity				
A					
B					
C					
D					
Port of export		Date	Signature	Official stamp and title	



Guidelines for Evaluating the Animal Container Density

IATA LAR section 8.2.4 shows Stocking Density Guidelines for some adult exotic species

- Container dimensions must be related to the actual size of the animal for which the container is constructed
- Must reflect the ventilation and welfare requirements for the species.

SPECIES-SPECIFIC DENSITY GUIDELINES					
Species	Weight (grams)	Space per Animal (C)		Height	
		cm ²	in ²	cm	in
Guinea Pigs	Up to 350	165	26	17	7
	351–600	275	43	17	7
	601–800	329	51	17	7
	>800	422	65	17	7
Hamsters	Up to 35	32	5	10	4
	36–50	52	8	13	5
	51–80	82	13	15	6
	>80	110	17	15	6
Gerbils	Up to 25	40	6	13	5
	26–35	45	7	13	5
	36–50	65	10	15	6
	51–60	82	13	17	7
	61–70	110	17	17	7
	>70	137	21	17	7
Rabbits	Up to 2.5	819	127	25	10
	>2.5	1645	255	25	10
Chinchillas (**) (C)	Up to 250	290	45	15	6

From IATA LAR 50th Ed. Chart truncated to fit slide



Guidelines for Evaluating the Animal Container Density



Packing Density for Lizards and Tuataras (not including Chameleons and farmed Iguana iguana):

From IATA LAR 50th Ed.

Snout-vent-length (SVL)	Body-width (BW)	Maximum no. of animals per bag	Minimum bag size
≥ 20 cm (8 in)	≥ 5 cm (2 in)	1	Depending on the size of the animal
≥ 15 < 20 cm (6 < 8 in)	≥ 2.5 < 5 cm (1 < 2 in)	15	45 × 60 cm (18 × 24 in)
		10	30 × 45 cm (12 × 18 in)
≥ 10 < 15 cm (4 < 6 in)	< 2.5 cm (1 in)	30	45 × 60 cm (18 × 24 in)
		20	30 × 45 cm (12 × 18 in)
< 10 cm (4 in)	< 2.5 cm (1 in)	30	30 × 45 cm (12 × 18 in)

Reptiles and amphibians, as well as many other taxa, have specific packing densities described in the LAR.



Guidelines for Evaluating the Animal Container Density

Additionally, the following stocking densities variables must be taken into account

- Acclimation to other animals (conspecifics)
- Ambient temperatures and ventilation of container and capacity of the aircraft
- Ability of animals to dissipate heat.
- Animals confined in groups, must be stocked at a density high enough to prevent injuries at take-off, during turbulence and at landing, but not to the extent that individual animals cannot lie down and rise unaided without risk of injury or crushing;
- Fresh air ventilation,
- Humidity



Sea World



The IATA Live Animals Regulations (LAR) has specific details on container requirements for all taxa of animals, CITES-listed

It is an evolving document and continues to be revised based on best practices of used by professional working with wildlife, but the general principles presented here should be considered as new methods are developed.



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