FLORIUS
fresh & colourful

STANDARD OPERATING PROCEDURES

FLOWER EXPORTS ETHIOPIA

FLORIUS FLOWERS
Office 101 Dubai Flower Centre
Dubai – PO BOX 58332 – United Arab Emirates

www.floriusflowers.com sales@floriusflowers.com +971-429-55-610 / +1-305-767-2065

MAY 2022

This document is prepared and made by Florius Flowers as part of its Quality Assurance Protocols. This document contains details about proper transport, handling, and storage of their packed boxes.

This document is valid for a period of one year. After one year, this document will be reissued without change or revised by Florius Flowers.

Questions regarding this document or other quality related concerns should be addressed directly to the Quality Staff at:

FLORIUS FLOWERS
Office 101 Dubai Flower Centre
Dubai, United Arab Emirates PO BOX 58332
Phone: +1 305 767 2065
WhatsApp: +1 305 767 2065
Email: sales@floriusflowers.com
Website: www.floriusflowers.com

DEPARTURE PROCEDURES AND GUIDELINES

DEPARTURE BY PLANE

1

PROPERLY CHIMNEY STACK THE BOXES BEFORE DEPARTURE

2

STORE PALLETS IN COLDEST COOLER

3

BUILD ULD. NO EARLIER THAN 9 HOURS BEFORE CONFIRMED DEPATURE

4

STORE ULD INSIDE AND COLD

5

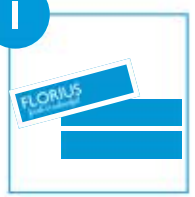
BRING TO AIRCRAFT AND LOAD (DON'T KEEP ULDS OUTSIDE)

6

BON VOYAGE!

(IN CASE OF >9 HOURS DELAY)

1



BREAK ULD

2

STORE CHIMNEY STACKED PALLETS IN THE COLDEST COOLER (+0C)

3

BUILD ULD (WHEN NEW CONFIRMED TIME OF DEPARTURE, 9 HOURS BEFORE DEPARTURE)

4

STORE ULD INSIDE AND COLD

5

BRING TO AIRCRAFT AND LOAD (DON'T KEEP ULDS OUTSIDE)

6

BON VOYAGE!

IT IS VERY IMPORTANT TO KEEP THE COLD-CHAIN PROCESS INTACT DURING THE ENTIRE ARRIVAL PROCESS. KEEPING THE FLOWERS AT THE RECOMMENDED TEMPERATURE RANGE MUST BE THE TOP PRIORITY AT ALL TIMES.

BOX TRANSPORT GUIDELINES

QUICK OFFLOAD

OUR FLOWERS ARE PERISHABLES. IT IS HIGHLY SUGGESTED TO COMPLETE OFFLOADING THE FLOWERS WITHIN 30 MINUTES.

TEMPERATURE SENSITIVE

OUR FLOWERS ARE HIGHLY SENSITIVE TO HEAT AND TEMPERATURE CHANGES. AFTER A LONG FLIGHT, ENSURE THAT THE FLOWERS ARE KEPT IN COLD STORAGE.

0-1°C	0-2°C	0-4°C
BEST	GOOD	ACCEPTABLE

MOISTURE SENSITIVE

MOISTURE HASTENS THE BROWNING OF OUR FLOWERS. IT'S BEST TO KEEP OUR FLOWERS IN COOL AND DRY STORAGE AT ALL TIMES. KEEP AWAY FROM SUNLIGHT AND RAIN.

PHYSICAL DAMAGE OFTEN OCCURS DURING FLIGHT AND TRANSPORT OF OUR FLOWERS. FOLLOWING THE GUIDELINES LISTED ABOVE WILL REDUCE THE CHANCES OF OUR BOXES AND FLOWERS BEING DAMAGED.

BOX TYPE

HALF BOX (HB)

APPROXIMATE WEIGHT:	9 KGS
BOXES PER CHIMNEY STACKED PALLET:	36 BOXES
MAX LAYERS PER CHIMNEY STACKED PALLET:	9 LAYERS (4 HB / LAYER)

QUARTER BOX (QB)

APPROXIMATE WEIGHT:	4.5 KGS
BOXES PER CHIMNEY STACKED PALLET:	76 BOXES
MAX LAYERS PER CHIMNEY STACKED PALLET:	19 LAYERS (4 QB / LAYER)

EIGHT BOX (EB)

APPROXIMATE WEIGHT:	2.25 KGS
BOXES PER CHIMNEY STACKED PALLET:	120 BOXES
MAX LAYERS PER CHIMNEY STACKED PALLET:	19 LAYERS (8 EB / LAYER)

PLEASE FOLLOW THE SUGGESTED BOX STACKING PROCEDURE TO ENSURE THAT NO PHYSICAL DAMAGE / TRAUMA WILL BE DONE TO FLOWERS.

ENSURE ALL UNIT LOAD DEVICES (ULD) ARE INSIDE THE STORAGE FACILITY AND THAT NOTHING IS LEFT OUTSIDE.

BOX HANDLING GUIDELINES

HOLDING THE BOXES HORIZONTALLY LIMITS THE MOVEMENT OF THE FLOWERS INSIDE.

LESS MOVEMENT = LESS DAMAGE

HOLDING THE BOXES VERTICALLY ALLOWS THE FLOWERS TO MOVE MUCH MORE FREQUENTYLY INSIDE THE BOX.

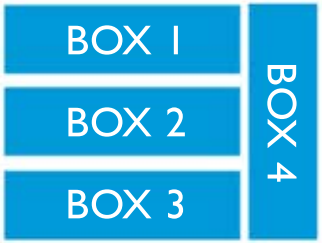
MORE MOVEMENT = MORE DAMAGE

1 CHIMNEY STACKING PROCEDURE

STEP 1

BEGIN BY PLACING THREE (3) ADJACENT BOXES HORIZONTALLY. PLACE ONE (1) BOX VERTICALLY ON ONE SIDE TO FILL THE PALLET COMPLETELY.

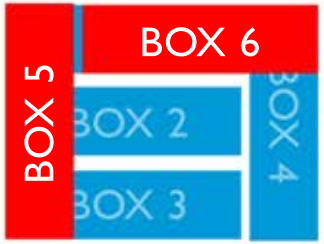
FIGURE 1



STEP 2

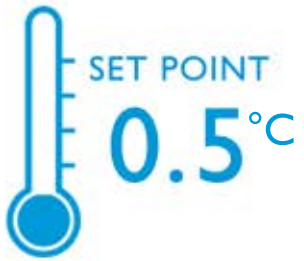
BEGIN THE NEXT LAYER BY PLACING ONE (1) VERTICALLY POSITIONED BOX ON THE OPPOSITE END OF THE PALLET. PLACE THREE (3) HORIZONTALLY POSITIONED BOXES AFTERWARDS.

FIGURE 2



2 STORAGE TEMPERATURE GUIDELINES

STORE ULD AS COLD AS POSSIBLE



BEST

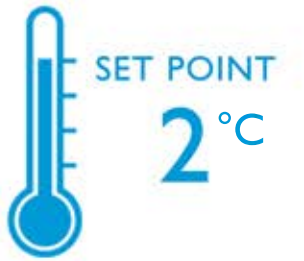
0-1°C / 32-34°F

TEMPERATURE VARIANCE

GOOD

0-2°C / 32-37°F

TEMPERATURE VARIANCE



ACCEPTABLE

0-4°C / 32-39°F

TEMPERATURE VARIANCE

FAILING TO ADHERE TO THE TEMPERATURE GUIDELINES WILL INCREASE THE GERMINATION AND DEGRADATION OF OUR FLOWERS WHICH RESULTS TO LESSER QUALITY AND SHORTER VASE LIFE.

1 AKE - LAYER 1

1EB: Place 1 EB next to the HB to complete Layer 1

Since two QB's equal the size of one HB and two EB's equal the size of one QB, we might exchange one HB's for two QB boxes though never will the other way around since that will not fit.

Don't build ULD earlier than 9 hours before confirmed departure

LOADING CONFIGURATION

LAYER 1
7HB & 3EB

LAYER 2
7HB, 1QB & 5 EB

GAP FILLER
1QB

LAYER 3
12QB

LAYER 4
12HB

LAYER 5
12HB

LAYER 6
12HB

LAYER 7
12HB

LAYER 8
8HB + 12EB

TOTAL:
70 HB + 14 QB + 20 EB

WEIGHT: 700 kgs (+/- 6%)

2 AKE - LAYER 2

GAP FILLER: 1 QB

Since two QB's equal the size of one HB and two EB's equal the size of one QB, we might exchange one HB's for two QB boxes though never will the other way around since that will not fit.

Don't build ULD earlier than 9 hours before confirmed departure

LOADING CONFIGURATION

LAYER 1
7HB & 3EB

LAYER 2
7HB, 1QB & 5 EB

GAP FILLER
1QB

LAYER 3
12QB

LAYER 4
12HB

LAYER 5
12HB

LAYER 6
12HB

LAYER 7
12HB

LAYER 8
8HB + 12EB

TOTAL:
70 HB + 14 QB + 20 EB

WEIGHT: 700 kgs (+/- 6%)

3 AKE - LAYER 3

LOADING CONFIGURATION

LAYER 1
7HB & 3EB

LAYER 2
7HB, 1QB & 5 EB

GAP FILLER
1QB

LAYER 3
12QB

LAYER 4
12HB

LAYER 5
12HB

LAYER 6
12HB

LAYER 7
12HB

LAYER 8
8HB + 12EB

TOTAL:
70 HB + 14 QB + 20 EB

WEIGHT: 700 kgs (+/- 6%)

Since two QB's equal the size of one HB and two EB's equal the size of one QB, we might exchange one HB's for two QB boxes though never will the other way around since that will not fit.

Don't build ULD earlier than 9 hours before confirmed departure

4 AKE - LAYER 4-8

LOADING CONFIGURATION

LAYER 1
7HB & 3EB

LAYER 2
7HB, 1QB & 5 EB

GAP FILLER
1QB

LAYER 3
12QB

LAYER 4
12HB

LAYER 5
12HB

LAYER 6
12HB

LAYER 7
12HB

LAYER 8
8HB +12EB

TOTAL:
70 HB + 14 QB + 20 EB

WEIGHT: 700 kgs (+/- 6%)

Since two QB's equal the size of one HB and two EB's equal the size of one QB, we might exchange one HB's for two QB boxes though never will the other way around since that will not fit.

Don't build ULD earlier than 9 hours before confirmed departure

BACK TO EMIRATES WAREHOUSE

Keep ULD Cold, do not put it outside. Keep inside the cooler.

ADVISED TEMPERATURE

SET POINT 0.5°C

BEST

0-1°C / 32-34°F

TEMPERATURE VARIANCE

SET POINT 1°C

GOOD

0-2°C / 32-37°F

TEMPERATURE VARIANCE

SET POINT 2°C

ACCEPTABLE

0-4°C / 32-39°F

TEMPERATURE VARIANCE

LOADING - STORING BOXES BEFORE FLIGHT

ULD SHOULD NOT BE STORED OUTSIDE THE TARMAC BEFORE THE ACTUAL LOADING STARTS.

- ✓ ULD SHOULD BE LOADED DIRECTLY ONCE BROUGHT OUTSIDE OF COLDSTORE
- ✓ THIS SLOWS DOWN THE ORGANIC HEATING OF THE PALLETS.
- ✓ THIS PREVENTS THE ULD'S FROM GETTING WET AND MOISTURE.

- X ULD SHOULD NEVER BE STORED OUTSIDE
- X ULD OUTSIDE RISK GETTING TOO MUCH MOISTURE AND RAIN
- X ULD'S OUTSIDE HEAT UP DUE TO THE WARM SURROUNDING, SUN AND HOT TARMAC.

BON VOYAGE!

DELAYED FLIGHT DEPARTURES?

REASONS OF DELAYED FLIGHT:

1. Technical Difficulties
2. Weather Issues

INSTRUCTIONS IF THERE IS A DELAYED FLIGHT:

1. Break the ULD
2. Chimney stack again to avoid organic heat
3. Wait again until we got a new flight departure schedule

ORGANIC HEAT AND CUT FLOWERS

WHAT IS ORGANIC HEAT?

ORGANIC HEAT IS PRODUCED BY ANY LIVING MATTER. ORGANIC HEAT IS DISPERSED DURING RESPIRATION OR TRANSPIRATION.

FAQs ABOUT ORGANIC HEAT

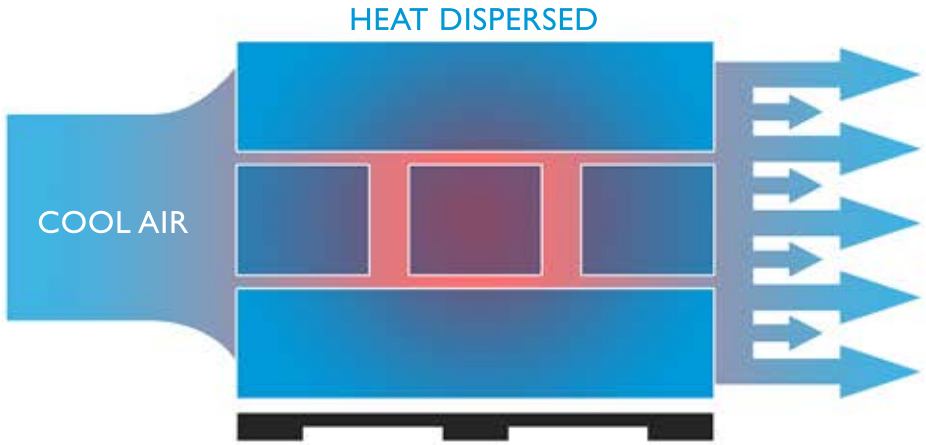
- ORGANIC HEAT INCREASES EXPONENTIALLY; THIS MEANS THAT THE HEAT TEMPERATURE INCREASE DOUBLES THE LONGER THE PRODUCT/S ARE NOT SUBJECTED TO RE-COOLING.

- ORGANIC HEAT IS DIRECTLY RELATED TO VASE LIFE AND QUALITY. TO PUT IT SIMPLY, MORE ORGANIC HEAT EQUALS LESS VASE LIFE.

- ORGANIC HEAT INCREASES THE GERMINATION AND TRANSPIRATION OF CUT FLOWERS. THIS IS WHY IT IS VERY IMPORTANT TO KEEP THE SUGGESTED TEMPERATURE RAGES TO LIMIT ORGANIC PRODUCTION.

0-1°C	0-2°C	0-4°C
BEST	GOOD	ACCEPTABLE

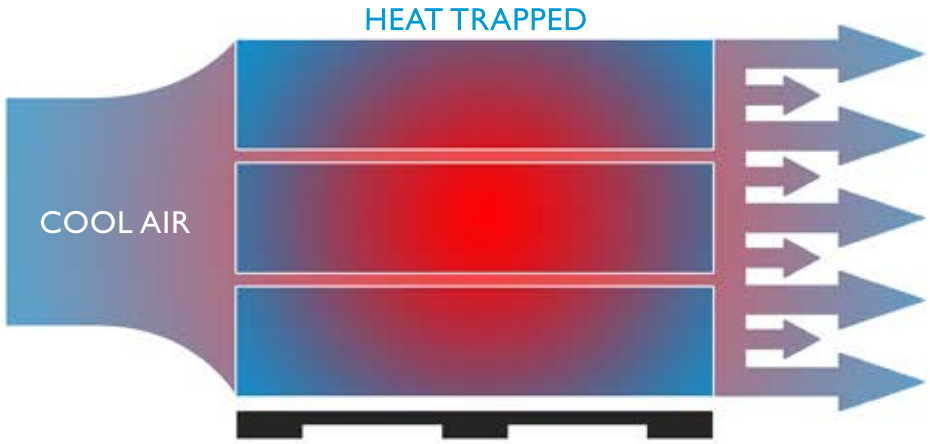
ORGANIC HEATING & THE PRINCIPLE OF CHIMNEY STACKING



CHIMNEY STACKING (RECOMMENDED)

WITH CHIMNEY STACKING METHOD, IT CAN BE SEEN THAT AIRFLOW IS VERY EFFICIENT. ORGANIC HEAT IS EASILY DISPERSED.

CHIMNEY STACKING GIVES ENOUGH BREATHING ROOM FOR EACH BOX. THIS IS WHY CHIMNEY STACKING IS THE STANDARD STACKING METHOD USED FOR FLOWER BOXES DURING EXPORT AND STORAGE.



TRADITIONAL STACKING (NOT RECOMMENDED)

WITH TRADITIONAL STACKING METHODS, AIRFLOW IS VERY LIMITED, THIS IN TURN TRAPS ALL THE BUILT-UP ORGANIC HEAT. THE HIGHEST HEAT CONCENTRATION CAN BE FOUND IN THE MIDDLE OF THE STACK.

IT IS OUR TOP PRIORITY TO MANAGE ORGANIC HEATING DURING EXPORT AND STORAGE. KEEPING THE FLOWERS AT A COOL 0-2°C TEMPERATURE WILL PRESERVE IT'S QUALITY, WHICH IN TURN WILL GIVE THE FLOWERS A LONGER VASE LIFE.

TEMPERATURE PROBING GUIDELINES

1. PREPARE ALL NECESSARY TOOLS THAT WILL BE USED DURING THE PROBING PROCESS.

2. NEXT, SLOWLY INSERT / PROBE THE THERMOMETER INTO THE FLOWER BOX.

3. AFTER PROBING, WAIT FOR 5 MINUTES TO ACQUIRE A PROPER TEMPERATURE READING.

4. AFTER 5 MINUTES, CHECK AND RECORD THE TEMPERATURE THAT'S DISPLAYED ON THE THERMOMETER.

5. KEEP THE METAL PART OF THE THERMOMETER WITHIN THE BOX; BE CAREFUL NOT TO PROBE TOO MUCH WHERE IT GOES THROUGH THE BOX.

OUR FLOWER BOXES COME IN 3 SIZES (HB, QB, EB). ENSURE THAT THE METAL PART OF THE THERMOMETER IS WITHIN THE BOX. IF YOUR THERMOMETER GOES THROUGH-AND-THROUGH THE BOXES, THE ACQUIRED TEMPERATURE MEASUREMENT WILL BE INCORRECT.

Thank you for reading our **Standard Operating Procesures for Box Transport & Handling**. If you have questions or concerns about our quality procedures and protocols, you may contact our quality team using the information listed below.

FLORIUS FLOWERS
Office 101 Dubai Flower Centre
Dubai, United Arab Emirates PO BOX 58332
Phone: +1 305 767 2065
WhatsApp: +1 305 767 2065
Email: sales@floriusflowers.com
Website: www.floriusflowers.com