

Take advantage of our unmatched support



**A GLOBAL
TEAM**
OF EXPERTS
DEDICATED
TO THE TRANSPORTATION
OF PHARMACEUTICALS



ONE
OF THE YOUNGEST
WIDE-BODIED
FLEETS IN THE
WORLD



**OVER
155**
DESTINATIONS
FROM DUBAI,
MAKING THE
WORLD MARKETS
MUCH MORE
ACCESSIBLE

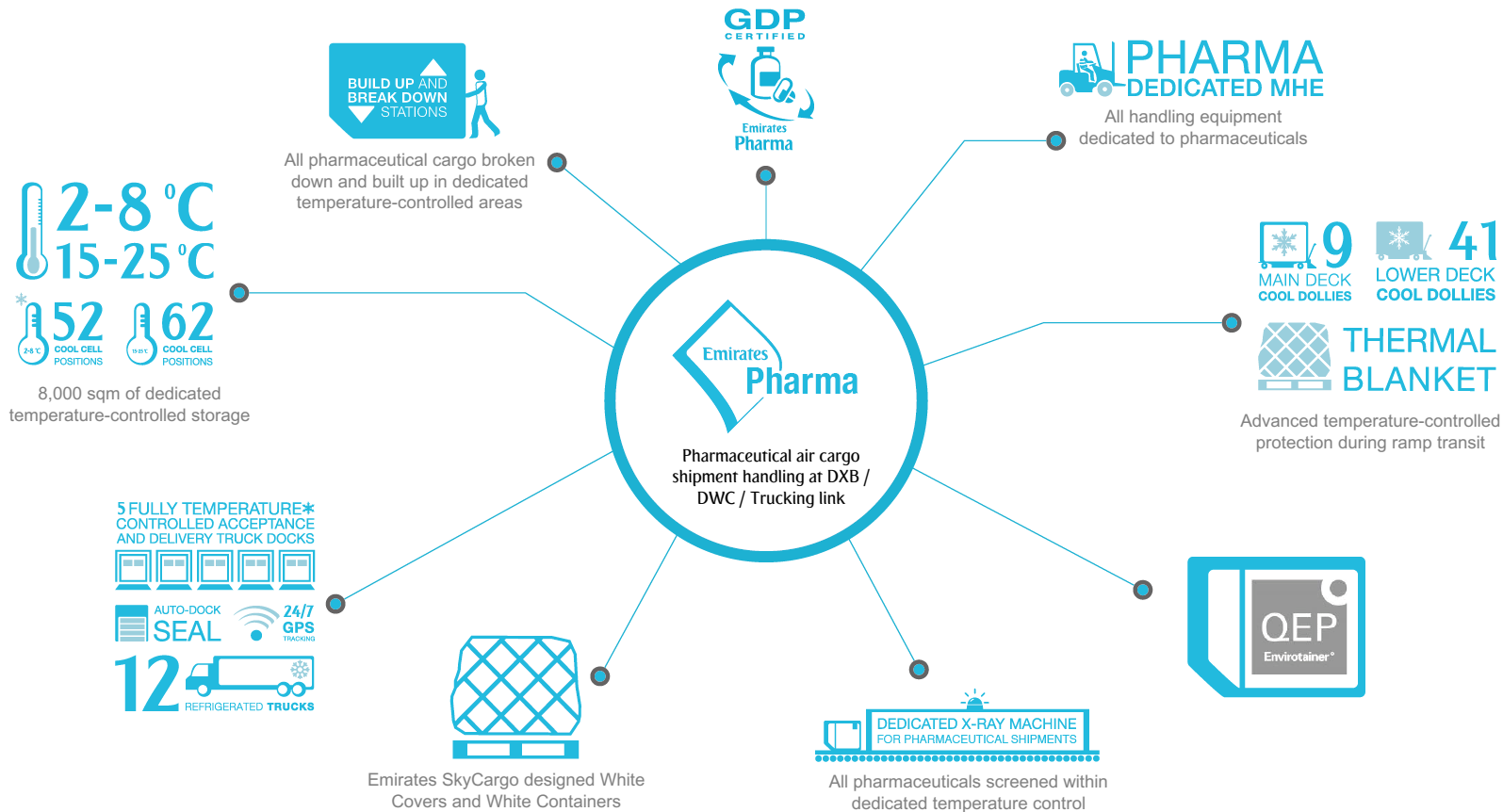


**OVER
250**
FLIGHTS DEPARTING
EVERY 24 HOURS
FROM DUBAI,
PROVIDING QUICK
TURN-AROUND



cargolux
**UNMATCHED
NETWORK,**
FREQUENCY AND
CAPACITY AS THE
LARGEST
INTERNATIONAL
AIR CARGO
PARTNERSHIP

Emirates Pharma unique features



Benefits of booking the Emirates Pharma service



Full CAPA process
if required



Temperature control
in aircraft hold



Expedited
delivery on arrival



Shipment flown as booked -
no split shipments



Non-daylight
hour landing



Temperature control
at origin / hub / destination



Temperature control
during ramp transit
in Dubai



Prioritised
ground handling



Confirmed space
-
no offloads



Emirates
Pharma

The solution for pharmaceutical products that are less temperature-sensitive, and for shipments moved with high quality / advanced passive packaging.



Emirates
Pharma
PLUS





Intended for pharmaceutical products that have highly sensitive temperature tolerance levels and need high-level protection.



Emirates
Pharma
ACTIVE

Designed for pharmaceutical products that require the highest level of temperature-stable handling and transport conditions.

Emirates Pharma products

			
 THERMAL BLANKET	✓		
QUICK RAMP TRANSPORTATION 	✓	✓	✓
PRIORITISED GROUND HANDLING 		✓	✓
* COOL DOLLY  <small>USED FOR TARMAC TRANSPORTATION</small>		✓	
 TEMPERATURE CONTROLLED STORAGE	✓	✓	✓
ACTIVE CONTAINERS 			✓
PRODUCT CODE		AXD	AXC

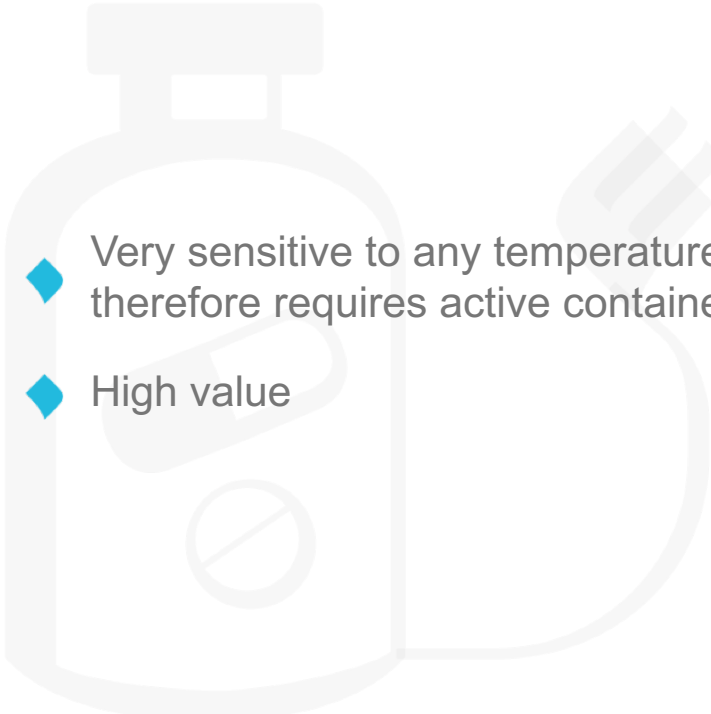


- ◆ Shipments moved with high quality passive / advanced passive packaging
- ◆ Shipper provides thermal cover
- ◆ Shipments recently moved from GCR pharmaceutical to temperature control
- ◆ Pharmaceuticals with a high temperature tolerance with stability data range of 0-40°C / 2-30°C
- ◆ Generally lower product value shipped



- ◆ Packaging not suited to extreme temperatures
- ◆ Pharmaceuticals with a low temperature tolerance with a closer stability data range of 2-8°C / 15-25°C
- ◆ Advanced temperature protection during ramp transit
- ◆ Medium - high product value shipped



- 
- ◆ Very sensitive to any temperature exposure therefore requires active container
 - ◆ High value

Container solutions

Active: Envirotainer, C-Safe, DoKaSch

Envirotainer offers two technologies:

- e1/e2 compressor cooling and electric heating
- t2 based on dry ice refrigeration



RKN T2 - 2.93m³
 RAP T2 - 8.22m³
 RKN E1 - 2.3m³
 RAP E2 - 6.38m³

C-Safe RKN is compressor-driven refrigeration of 4°C - 25°C.

The battery life is over 100 hours at 25°C



RKN - 1.95m³

DoKaSch electric cooling and heating - Cargo temperature range: +2°C - +30°C.

Battery charging time: 4 to 6 hours



RKN - 1.87m³
 RAP E2 - 6.5m³

Hybrid Passive: Va-q-tec, SkyCell

Va-q-tec are advanced passive containers using vacuum insulation panels based on the principles of the thermos flask. These panels offer unparalleled heat insulation at minimum thickness



Euro - 1.19m³
 US - 1.7m³
 XL - 2.5m³
 Twin - 3.2m³

SkyCell uses high end insulation technology and phase change material. Temperature protection under extreme conditions (up to +65°C and down to -35°C) and features permanent inside and outside temperature logging



770C / CRT - 0.75m³
 1500C / CRT - 1.54m³

Active solutions - online



Active containers checked every 6 hours when not in flight



Temperature information and battery levels uploaded online



Automatic notification when customer submits email on SkyChain

Dubai SkyCell hub

USA

Europe

Dubai

India

Asia

Africa

Australia



Emirates SkyCargo's fleet of dedicated SkyCell containers located in Dubai, preconditioned and ready to be positioned in the network

1 x EU / US-pallet SkyCell 1500C / 1500CRT

Loading volume: 3.2 m³
 External dimensions: 1530 x 1320 x 1600mm
 Internal dimensions: 1235 x 1040 x 1220mm

Tare weight: 479kg
 Max gross weight: 1497kg
 Volumetric weight: 539kg



SkyCell 1500C:
 Self-recharging at +2oC to +5oC

Loading volume: 3.2 m³
 External dimensions: 1530 x 1320 x 1600mm
 Internal dimensions: 1235 x 1040 x 1220mm

Tare weight: 479kg
 Max gross weight: 1497kg
 Volumetric weight: 539kg



SkyCell 1500CRT:
 Self-recharging at +15oC to +25oC

2 x EU-pallet SkyCell 2500C / 2500CRT

Loading volume: 2.5 m³
 External dimensions: 1943 x 1522 x 1600mm
 Internal dimensions: 1650 x 1240 x 1220mm

Tare weight: 650kg
 Max gross weight: 1850kg
 Volumetric weight: 788kg



SkyCell 2500C:
 Self-recharging at +2oC to +5oC

Loading volume: 2.5 m³
 External dimensions: 1943 x 1522 x 1600mm
 Internal dimensions: 1650 x 1240 x 1220mm

Tare weight: 650kg
 Max gross weight: 1850kg
 Volumetric weight: 788kg



SkyCell 2500CRT:
 Self-recharging at +15oC to +25oC



25 x less temperature deviation than active containers



5 x more energy storage than active containers, no battery, no dry-ice



30% cost savings,
 30% CO₂ savings

Our passenger and freighter network



- 2016 / 2017 Passenger Routes**
- ◆ Cebu and Clark - launched 30 March 2016
 - ◆ Vinchuan and Zhengzhou - launched 3 May 2016
 - ◆ Hanoi and Vangon - launched 3 August 2016
 - ◆ Fort Lauderdale - launched 15th December 2016
 - ◆ Newark - launched March 2017
 - ◆ Zagreb - 85 x 380-800 - 8000kgs launched June 2017
 - ◆ Phnom Penh - launched on 1 July 2017

CONNECTING OVER
155
DESTINATIONS

ACROSS
45
FREIGHTER
DESTINATIONS

COVERING
6
CONTINENTS

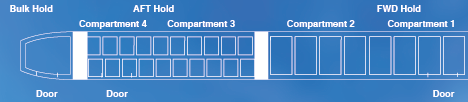
ACROSS
84
COUNTRIES

FLYING OVER
265
AIRCRAFT

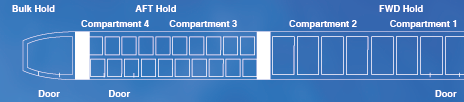
- Passenger Destinations
- Freighter Destinations
- Passenger & Freighter Destinations

Our fleet

BOEING 777-300
BOEING 777-300ER



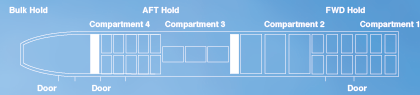
BOEING 777-300ER-ULR



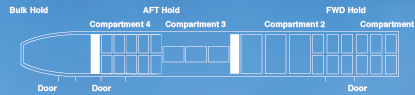
BOEING 777-200LR



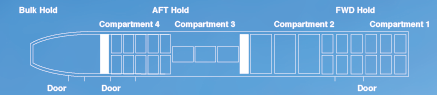
AIRBUS 380-800



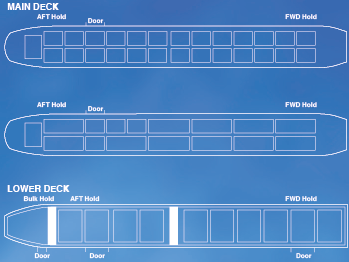
AIRBUS 380-800HD



AIRBUS 380-800QT



Our freighter fleet



BOEING 777F

STANDARD ULD CONFIGURATION

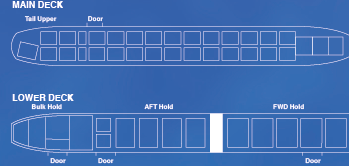
Main Deck:	27 PMC (96" x 125") 22 x 118" Height (Contour) / 4 x 118" Height (Contour) / 1 x 96" Height (No Contour)
Lower Deck:	Total 10 PMC (96" x 125")
Forward Hold:	6 PMC
AFT Hold:	4 PMC
ULD combinations are permitted	
Bulk Hold:	15 cubic metres

DOOR SIZES

Main Deck Door:	142" x 120"
Lower Deck Doors	
Forward Hold:	106" x 67"
AFT Hold:	106" x 67"
Bulk Hold:	35" x 47"
Cargo Tonnage:	103,000 kg
Cargo Volume:	560 cubic metres

NOTE: Height of lower deck units is restricted to 62"/158cm to make it compatible with passenger aircraft.

The Boeing 777F is the most environmentally-friendly freighter operated today, with the lowest fuel burn of any comparably-sized cargo aircraft. Along with its wide-deck cargo door which can accommodate oversized consignments, it is also capable of carrying up to 103 tonnes of cargo non-stop on 10-hour sector lengths.



BOEING 747-400 ERF

STANDARD ULD CONFIGURATION

Main Deck:	6 Q6 (96"), 1 Q6 (62"), 23 Q7 (118") and 02 PYB
Lower Deck:	9 LD36 or PMG & 2 AKE ULD
Combinations are permitted	
Bulk Hold:	15 cubic metres

DOOR SIZES

Main Deck Nose:	104" x 98"
Main Deck Side Door:	134" x 122"

LOWER DECK

Forward & AFT Hold:	104" x 66"
Bulk Hold:	44" x 47"
Cargo Tonnage:	117,000 kg
Cargo Volume:	625 cubic metres

NOTE: Height of lower deck units is restricted to 62"/158cm to make it compatible with passenger aircraft.

The Boeing 747-400 ERF is capable of carrying up to 117 tonnes. Its main deck-side cargo door, with a height of approximately three metres, allows the uplift of oversized shipments that cannot be accommodated in the belly-hold of passenger aircraft. The nose cargo door allows the carriage of long pieces.

Good Distribution Practice (GDP)

GOOD DISTRIBUTION PRACTICE

BUREAU VERITAS
Certification



GDP certification* by Bureau Veritas

- Pharmaceutical air cargo shipment handling at Dubai International Airport (DXB)
 - Ramp operations at Dubai International Airport (DXB):
 - From warehouse to aircraft staging area
 - From aircraft unloading to warehouse induction
- Pharmaceutical air cargo shipment handling at Dubai SkyCentral (DWC)
 - Ramp operations at Dubai SkyCentral (DWC):
 - From warehouse to aircraft staging area
 - From aircraft unloading to warehouse induction
- Road service between DXB to DWC

Hub Dubai

First GDP Certified multi-airport hub in the world

Emirates SkyCentral

CARGO TRANSIT FACILITIES



11,000 SQM EXPANSION

REAL TIME GPS TRACKING

GEO FENCED

POLICE SECURE MONITORING

Emirates Pharma

DEDICATED PHARMACEUTICAL TRANSIT FACILITIES



GDP certification* by Bureau Veritas

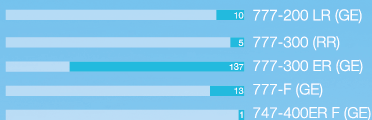


Emirates SkyCentral (DXB)

Dubai International Airport, Dubai

FACTS AND FIGURES

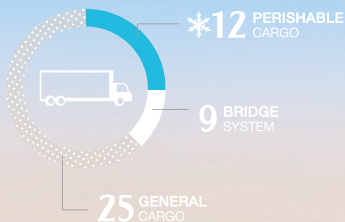
166 BOEING



100 AIRBUS



46 TRUCK DOCKS



GENERAL CARGO FACILITY



200 Tonne Blue Whale

2 MILLION TONNES*

* ANNUAL CARGO HANDLING CAPACITY

UNIT LOADING DEVICES
2488

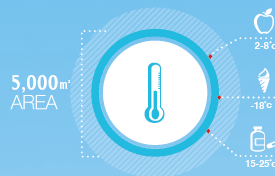
SPECIAL CARGO STORAGE

10,000 LOOSE CARGO STORAGE POSITIONS

PCHS PALLET CONTAINER HANDLING SYSTEM

ASRS AUTOMATED STORAGE RETRIEVAL SYSTEM

TEMPERATURE CONTROLLED ZONES



175k TONNES ANNUAL THROUGHPUT

52 ULD EXIT AIRSIDE GATES

40 LOWER DECK

41 DEDICATED PHARMA COOL DOLLIES

1 MAIN DECK

218 COOL CELL POSITIONS



CUSTOMS AND POLICE REAL TIME MONITORING

CENTRALISED SCREENING AND INTEGRATED POLICE FACILITY
ONE OF THE WORLD'S 1st

100% E-AIRWAY BILL DUBAI ENABLED

PHARMA DEDICATED MHE

24/7 OPERATION



Emirates SkyCentral (DWC)

Al Maktoum International Airport, Dubai

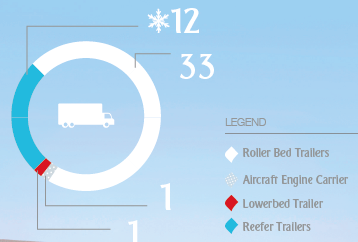
FACTS AND FIGURES

HOME TO OUR FREIGHTER FLEET

13 BOEING 777F

1 BOEING 747-400 ER F

47 DEDICATED TRUCKS



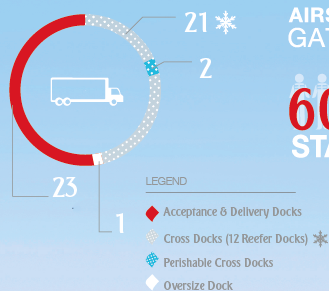
GENERAL CARGO FACILITY

x5,000 **1** MILLION TONNES* = 200 Tonne Blue Whale

* 810,000 TONNES CAPACITY, ADDITIONAL 190,000 TONNES PLANNED

45 TRUCK DOCKS **40** AIRSIDE GATES

600 STAFF



24/7 OPERATION

CUSTOMS AND POLICE

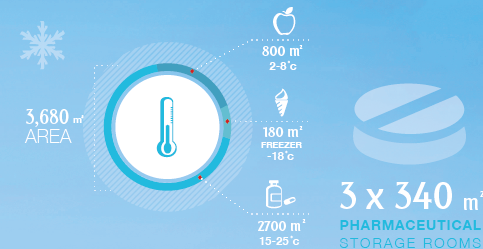
REAL TIME MONITORING

CENTRALISED SCREENING AND INTEGRATED POLICE FACILITY
ONE OF THE WORLD'S 1st

DIRECT RAMP ACCESS AIRCRAFT TO FACILITY

100% DUBAI E-AIRWAY BILL ENABLED

TEMPERATURE CONTROLLED ZONES



72 COOL CELLS

144 ULD POSITIONS

10 FREEZER POSITIONS

9 MAIN DECK COOL DOLLIES

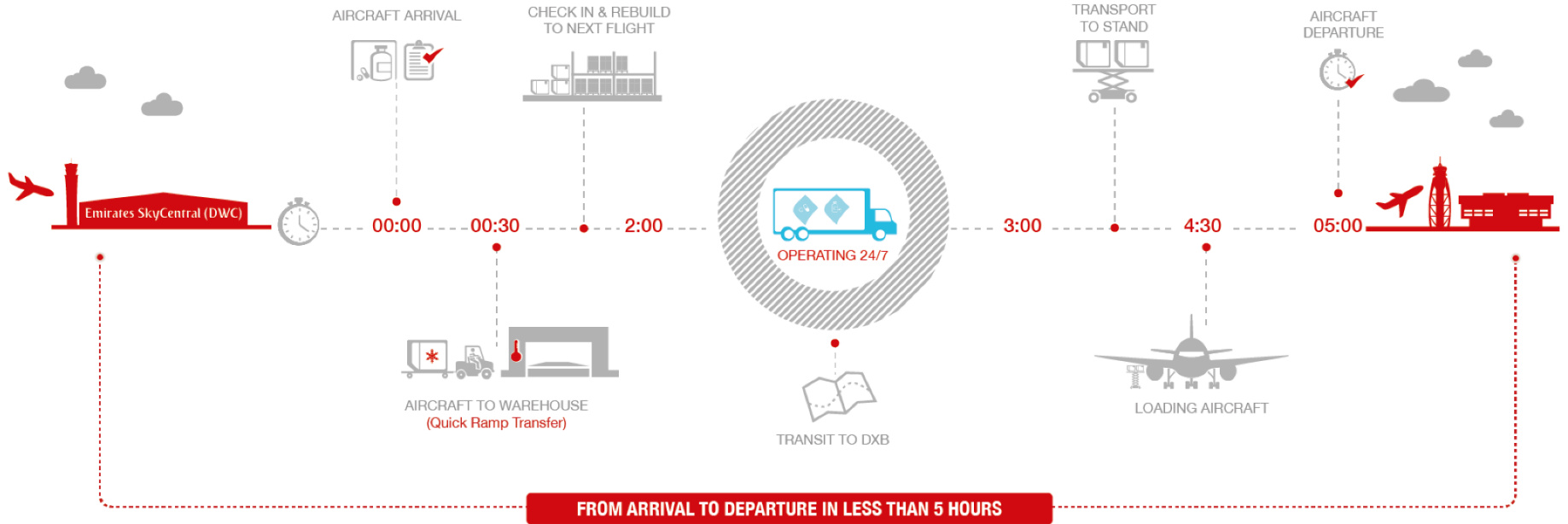
24/7 DRY ICE AVAILABILITY BATTERIES

BUREAU VERITAS CERTIFICATION
GDP certification* by Bureau Veritas



Connecting through our two hubs

DWC • 77KM • DXB



Emirates Pharma dedicated cool dollies



Transports temperature-sensitive cargo between aircraft and warehouse



Can maintain temperatures between 2°C - 20°C



Acts as a temporary storage unit at ramp for quick transfer cargo (connecting onward flights in 1-3 hours)

Emirates Pharma training



EU GDP
guideline



Quality system
process



Emirates SkyCargo
quality assurance
programme



Audit



Deviation
management



Deviation
recording,
measurement
and monitoring



Quality risk
management
approach



GDP compliant
premises



Hygiene



Cargo 2000 (C2K)
shipment milestone



Handling



Contingency
plan

What's coming up...

Daily / weekly pharmaceutical flights

Data Range 01st April 2016 to 31st Jan 2017					Pharma Movement ex FRA																			
			Monday			Tuesday			Wednesday			Thursday			Friday			Saturday			Sunday			
Org Pnt	Off Pnt	Flt#	Ch Wt (Kgs)	Avg Per Flt (Kgs)	Freq	Ch Wt (Kgs)	Avg Per Flt (Kgs)	Freq	Ch Wt (Kgs)	Avg Per Flt (Kgs)	Freq	Ch Wt (Kgs)	Avg Per Flt (Kgs)	Freq	Ch Wt (Kgs)	Avg Per Flt (Kgs)	Freq	Ch Wt (Kgs)	Avg Per Flt (Kgs)	Freq	Ch Wt (Kgs)	Avg Per Flt (Kgs)	Freq	
	DWC	Ek9708							308,677	9,361	33	53,973	10,795	6										
	Freighter	Ek9716																				5,098	5,098	1
		Ek9736										89,885	7,626	11										
		Ek9748																13,605	13,605	1				
		Ek9766													22,378	22,378	1							
		Ek9914																637,837	14,834	43				
		Ek9916	344,664	10,137	34	16,604	10,137	1																
		Ek9918							26,361	6,340	4													
		Ek9975										221,340	8,864	25	27,294	13,647	2							
		Ek9978				3,724	3,724	1														331,736	7,839	44
		Ek9994													321,185	8,090	40					102,111	20,422	6
		Ek9995	8,924	2,975	3																			
	Freighter Total		863,688	13,112	37	20,228	13,861	2	333,938	16,691	37	369,198	27,274	41	370,866	44,064	43	661,477	26,439	44	438,845	93,060	60	
	DKB																							
	Pax	Ek0044	50,426	1,146	44	414,729	9,426	44	149,733	3,483	43	66,360	1,543	43	161,981	3,679	44	147,611	3,365	44	191,113	4,343	44	
		Ek0046	48,425	1,101	44	76,883	1,725	44	40,810	949	43	41,655	969	43	66,191	1,604	44	2,104	48	44	45,970	1,042	44	
		Ek0048	225,672	5,129	44	99,712	2,266	44	73,367	1,706	43	71,762	1,669	43	73,415	1,669	44	20,801	473	44	47,963	1,090	44	
	PAX Total		324,622	7,375	132	690,324	13,416	132	263,940	6,138	129	179,777	4,181	129	301,498	6,862	132	170,616	1,876	132	284,936	6,476	132	
	Grand Total		678,110	20,487	169	610,551	27,278	134	697,878	21,829	166	638,974	31,456	170	672,364	60,906	176	821,893	32,314	176	723,880	99,536	182	

Funnelled/increased GHA and ramp pharmaceutical handling focus for all pharmaceutical shipments

Optimise consolidation per temperature range on ULD for AXD (and in parallel AXS) shipments

More focus and optimisation for temperature control during flight

Serve pharmaceutical stations with appropriate frequent capacity plan

Pharma station network



Our facilities



A large blue circular graphic on the left side of the page, filled with a repeating pattern of white medical icons. The icons include a refrigerated truck with a snowflake, a test tube with liquid, a single drop of liquid, a syringe, and a pill bottle with two pills.

For more information on Emirates Pharma
please visit [skycargo.com](https://www.skycargo.com)
or contact the Emirates SkyCargo office
on **+971 600 566 661**