STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: ***10000 '***

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 01

VNUKOVO TOWER	**118.300**
VNUKOVO DEPARTURE	**135.175**
MOSCOW DEPARTURE	**118.950 118.550 130.375 124.200**

PZ - 90.11 coordinates

+11°

UUR344 2400m/*7900 '* AGL GND
UUR344 3500m/*11500 '* AGL GND
UUR344 1200m/*4000 '* AGL GND
UUR392 3650m/*12000 '* AGL GND
UUR250 500m/*1700 '* AGL GND
UUR450 1850m/*6000 '* AMSL GND
UUP51 UNL GND
UUR450 1850m/*6000 '* AMSL GND
UUR269 FL400 1850m/*6000 '* AMSL
UUR417 3050m/*10000 '* AMSL GND
UUR288 1200m/*4000 '* AMSL GND
UUR345 1850m/*6000 '* AMSL GND
UUR415 3050m/*10000 '* AMSL GND
UUR414 1200m/*4000 '* AMSL GND
UUR317 950m/*3100 '* AMSL GND
UUP68 750m/*2500 '* AMSL GND
UUR280 450m/*1500 '* AMSL GND
UUP53 FL265 GND
UUP52 UNL GND
UUP63 UNL GND
UUP78 450m/*1500 '* AMSL GND
UUP96 350m/*1200 '* AMSL GND
UUP95 250m/*900 '* AMSL GND
UUP94 300m/*1000 '* AMSL GND
UUR440 850m/*2800 '* AMSL GND
UUR390 2450m/*8000 '* AMSL GND
UUR370 3350m/*11000 '* AMSL GND
UUR215 FL980 FL150
UUR216 FL980 GND
UUR219 FL980 FL100
UUR218 FL980 GND
UUR341 FL140 GND

SHEREMETYEVO 114.6 MR
55 58 44N 037 19 41E

OPALIKHA 109.7 OPH
55 49 31N 037 16 14E

VNUKOVO 113.7 WNK
55 35 18N 037 15 15E

KAMENKA 111.6 IKM
55 13 19N 036 59 42E

MARYINO 112.5 MRN
55 42 41N 038 13 42E

CHULKOVO 109.2 LP
55 33 10N 038 02 08E

DOMODEDOVO 113.3 DMD
55 23 18N 037 54 42E

GLOTAYEVO 113.5 GLW
55 09 46N 037 47 55E

MOSCOW

755 ' 896 ' 788 ' 906 ' 775 ' 2300 ' 3300 ' 716 ' 703 '

MSA 46km from ARP

Moskva
Pahra
Kyzyzmo

BESTA 10000 ' IAS 465km/h
9.6 296° BESTA 1A
RUGEL 10000 ' IAS 465km/h
23.9 348° BESTA 1A
PEREK ❷ 9000 ' or above IAS 465km/h
ROPAP 10000 ' IAS 465km/h
10.0 KOGOM 1A, OLMUN 1A
053° 061°
SENAR FL110-FL130 IAS 500km/h
KOGOM 1A, OLMUN 1A
058° 10.0 KOGOM 1A, OLMUN 1A, NIGLI 1A
112° 22.1 NIGLI 1A
NIGLI FL110-FL130 IAS 465km/h
GEKLA 8000 '-9000 ' IAS 465km/h
BAZUL 7000 '-8000 ' IAS 465km/h
049° 9.2 BESTA 1A, KOGOM 1A, OLMUN 1A, NIGLI 1A
9.3 BESTA 1A, KOGOM 1A, OLMUN 1A, NIGLI 1A
BITSA 6000 '-7000 ' ❶ IAS 425km/h
8.0 027° 117° 10.8 110° 9.1
WW011 IAS 390km/h Bank 20°
WW012 IAS 425km/h
180° 23.0 REMLI 1A
REMLI 6000 ' IAS 465km/h
FAPAS FL140 IAS 500km/h
054° 27.9 OLMUN 1A
28.0 OLMUN 1A
37.1 KOGOM 1A
LUNIS FL140 IAS 500km/h
28.0 KOGOM 1A
BINPI FL170 IAS 500km/h
MOLZI FL170 IAS 500km/h
29.8 OLMUN 1A
24.0 KOGOM 1A
OLMUN FL190 IAS 500km/h
KOGOM FL190 IAS 500km/h

BESTA 1A, KOGOM 1A, NIGLI 1A, OLMUN 1A, REMLI 1A

SCALE 1 : 500 000
km5 0 5 10 15km

Feet (QNH)	Metres (QFE)
10000	(2860)
9000	(2555)
8000	(2250)
7000	(1945)
6000	(1640)
3300	(815)

RNAV 1

DME/DME or GNSS is required

❶ ***6000 '*** - for SID REMLI 1A;
❷ ***9000 '-10000 '*** - for SID NIGLI 1A.

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 5.8% up to ***6000 '*** for all SID.

If unable to maintain the published minimum climb gradient, inform ATC unit.

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

Close-in obstacle: LAMP POST, DIST is 165m, ELEV *683 '*
HANGAR, DIST is 180m, ELEV *670 '*
from THR RWY 19.
012°
THR RWY 19 DEPARTURE TRACK
683 ' *670 '*
NOT TO SCALE

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN ***FEET***
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

CHANGE: New chart

STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: *10000 '*

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 19

VNUKOVO TOWER	118.300
VNUKOVO DEPARTURE	135.175
MOSCOW DEPARTURE	118.950 118.550 130.375 124.200

PZ - 90.11 coordinates

BESTA 1C, KOGOM 1C, NIGLI 1C, OLMUN 1C, REMLI 1C

Feet (QNH)	Metres (QFE)
10000	(2855)
9000	(2555)
8000	(2250)
7000	(1945)
6000	(1640)
3300	(815)

RNAV 1

DME/DME or GNSS is required

❶ *6000 '* - for SID REMLI 1C

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 3.4% up to *5000 '* for all SID.

If unable to maintain the published minimum climb gradient, inform ATC unit.

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN *FEET*
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

SCALE 1 : 500 000

Close-in obstacle: TREE, DIST is 407m, ELEV *711 '*
LIGHTNING ROD, DIST is 155m, ELEV *687 '*
from THR RWY 01.
DEPARTURE TRACK 192° THR RWY 01
NOT TO SCALE

CHANGE: New chart

STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: ***10000 '***

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 06

VNUKOVO TOWER	**118.300**
VNUKOVO DEPARTURE	**135.175**
MOSCOW DEPARTURE	**118.950 118.550 130.375 124.200**

PZ - 90.11 coordinates

BESTA 1B, KOGOM 1B, NIGLI 1B, OLMUN 1B, REMLI 1B

Feet (QNH)	Metres (QFE)
10000	(2860)
9000	(2555)
8000	(2250)
7000	(1945)
6000	(1640)
4500	(1185)
3300	(815)

RNAV 1

DME/DME or GNSS is required

❶ ***4500*** 'or above - for SID REMLI 1B;
❷ ***9000*** '-***10000*** '- for SID NIGLI 1B.

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 7.0% up to ***6000*** ' for SID BESTA 1B, NIGLI 1B, OLMUN 1B, KOGOM 1B;
- 5.8% up to ***4500*** ' for SID REMLI 1B.

If unable to maintain the published minimum climb gradient, inform ATC unit.

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN ***FEET***
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req); -hPa(mm on req).

SCALE 1 : 500 000

CHANGE: New chart

STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: *10000* '

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 24

VNUKOVO TOWER	118.300
VNUKOVO DEPARTURE	135.175
MOSCOW DEPARTURE	118.950 118.550 130.375 124.200

PZ - 90.11 coordinates

BESTA 1D, KOGOM 1D, NIGLI 1D, OLMUN 1D, REMLI 1D

Feet (QNH)	Metres (QFE)
10000	(2840)
9000	(2535)
8000	(2230)
7000	(1925)
6000	(1625)
5000	(1320)
3300	(800)

RNAV 1

DME/DME or GNSS is required

❶ *7000* ' - for SID KOGOM 1D, NIGLI 1D, OLMUN 1D;
❷ *8000* ' - for SID KOGOM 1D, NIGLI 1D, OLMUN 1D;
❸ *9000* ' - for SID KOGOM 1D, NIGLI 1D, OLMUN 1D;
❹ *6000* ' - for SID REMLI 1D.

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 3.4% up to *5000* ' for all SID.

If unable to maintain the published minimum climb gradient, inform ATC unit.

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

Close-in obstacle: TREE, DIST is 328m, ELEV *701* '
TREE, DIST is 445m, ELEV *704* '
FOREST BORDER, DIST is 599m, ELEV *714* '
FOREST BORDER, DIST is 726m, ELEV *716* '
from THR RWY 06.

DEPARTURE TRACK 237° THR RWY 06

716' 714' 704' 701'

NOT TO SCALE

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN *FEET*
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

SCALE 1 : 500 000
km5 0 5 10 15km

SHEREMETYEVO 114.6 MR
55 58 44N 037 19 41E

OPALIKHA 109.7 OPH
55 49 31N 037 16 14E

VNUKOVO 113.7 WNK

MOSCOW

MARYINO 112.5 MRN
55 42 41N 038 13 42E

CHULKOVO 109.2 LP
55 33 10N 038 02 08E

DOMODEDOVO 113.3 DMD
55 23 18N 037 54 42E

GLOTAYEVO 113.5 GLW
55 09 46N 037 47 55E

KAMENKA 111.6 IKM
55 13 19N 036 59 42E

UUP63 UNL GND
UUP52 UNL GND
UUP53 FL265 GND
UUP78 450m/1500' AMSL GND
UUP95 250m/900' AMSL GND
UUP94 300m/1000' AMSL GND
UUP96 350m/1200' AMSL GND
UUP68 750m/2500' AMSL GND
UUP51 UNL GND

UUR344 2400m/7900' AGL GND
UUR344 3500m/11500' AGL GND
UUR344 1200m/4000' AGL GND
UUR392 3650m/12000' AGL GND
UUR250 500m/1700' AGL GND
UUR450 1850m/6000' AMSL GND
UUR450 1850m/6000' AMSL GND
UUR417 3050m/10000' AMSL GND
UUR269 FL400 1850m/6000' AMSL
UUR288 1200m/4000' AMSL GND
UUR345 1850m/6000' AMSL GND
UUR415 3050m/10000' AMSL GND
UUR414 1200m/4000' AMSL GND
UUR317 950m/3100' AMSL GND
UUR280 450m/1500' AMSL GND
UUR341 FL140 GND
UUR440 850m/2800' AMSL GND
UUR390 2450m/8000' AMSL GND
UUR370 3350m/11000' AMSL GND
UUR215 FL980 FL150
UUR216 FL980 GND
UUR219 FL980 FL100
UUR218 FL980 GND

BESTA 10000' IAS 465km/h
RUGEL 10000' IAS 465km/h
PEREK 10000' IAS 465km/h
ROPAP 10000' IAS 465km/h
SENAR FL110-FL130 IAS 500km/h
LUNIS FL140 IAS 500km/h
FAPAS FL140 IAS 500km/h
BINPI FL170 IAS 500km/h
MOLZI FL170 IAS 500km/h
OLMUN FL190 IAS 500km/h
KOGOM FL190 IAS 500km/h
NIGLI FL110-FL130 IAS 465km/h
GEKLA 8000'-9000' ❸ IAS 465km/h
BITSA 6000'-7000' ❶❷ IAS 465km/h
BAZUL ❷ 7000'-8000' IAS 465km/h
KENEP 5000' or above IAS 465km/h
KANEN 6000' or above IAS 465km/h
REBRI IAS 405km/h Bank 20°
WW240 IAS 405km/h Bank 20°
LIKNI IAS 425km/h Bank 20°
REMLI 6000' IAS 465km/h

BESTA 1D 9.6 296° 23.9 348°
OLMUN 1D 27.9 28.0 29.8
KOGOM 1D 24.0 28.0 37.1
NIGLI 1D 22.1
REMLI 1D 23.0
KOGOM 1D, OLMUN 1D 10.0 058° 112°
BESTA 1D, KOGOM 1D, OLMUN 1D, NIGLI 1D 9.3 9.2 049°
KOGOM 1D, OLMUN 1D, NIGLI 1D 10.0 053° 061°
BESTA 1D, KOGOM 1D, OLMUN 1D, NIGLI 1D 10.0 097° 16.6
079° 11.0
349° 10.5
259° 7.6
223° 7.1
180° 10.8
054°

MSA 46km from ARP 3300'

Moskva
Pahra
Kyuzmo

CHANGE: New chart

STANDARD DEPARTURE CHART
INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: **10000 '**

MOSCOW

MARYINO
112.5 MRN
55 42 41N 038 13 42E

VNUKOVO
113.7 WNK
55 35 18N 037 15 15E

CHULKOVO
109.2 LP
55 33 10N 038 02 08E

DOMODEDOVO
113.3 DMD
55 23 18N 037 54 42E

GLOTAYEVO
113.5 GLW
55 09 46N 037 47 55E

VENEV
335 FV
54 20 44N 038 14 19E

VENEV
108.6 WW
54 20 46N 038 14 19E

UUP52 UNL GND
UUP53 FL265 GND
1200m /3900 ' AGL GND
400m /1300 ' AGL GND
UUP63 UNL GND
UUP96 350m/1200 ' AMSL GND
UUP78 450m/1500 ' AMSL GND
UUP95 250m/900 ' AMSL GND
UUP94 300m/1000 ' AMSL GND
UUR440 850m/2800 ' AMSL GND
UUR390 2450m/8000 ' AMSL GND
UUR370 3350m/11000 ' AMSL GND
UUR215 FL980 FL150
UUR372 FL140 GND
UUR219 FL980 FL100
UUR245 FL400 FL360
UUR238 FL360 FL100
UUR252 900m/3000 ' AMSL GND
UUR448 700m/2300 ' AMSL GND
UUP92 1200m/4000 ' AMSL GND
UUR427 700m/2300 ' AMSL GND
UUP400 900m/3000 ' AMSL GND
UUP79 600m/2000 ' AMSL GND
UUR424 FL120 GND
UUR366 FL180 GND

+11°
3300 '
MSA
46km from ARP

BITSA
6000 ' -7000 '
IAS 425km/h

WW011
IAS 390km/h
Bank 20°

WW012
IAS 425km/h

GEGNA
7000 ' -8000 '
IAS 465km/h

BIPSI
9000 ' or above
IAS 465km/h

LIFAS
10000 '
IAS 465km/h

ULRON
10000 '
IAS 500km/h

SURZA
10000 '
IAS 500km/h

BABUT
FL110-FL130
IAS 500km/h

RUDUR
FL110-FL130
IAS 500km/h

BUNZI
FL130-FL150
IAS 500km/h

POZUK
FL140 or above
IAS 500km/h

OMEZA
FL150
IAS 500km/h

RINLO
FL150-FL190
IAS 500km/h

ANEPO
FL170-FL250
IAS 500km/h

LINRU
FL190-FL270
IAS 500km/h

FEGRA
FL170
IAS 500km/h

TOGMO
FL190
IAS 500km/h

027° 8.0
117° 10.8
110° 9.1
126° 9.5
161° 18.6
152° 10.0
123° 10.0
9.5
9.3
18.5
310
108° 20.0
138° 19.1
29.6
18.9
18.9
20.2
19.3

LINRU 1A, TOGMO 1A

RNAV 1
DME/DME or GNSS is required

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 5.8% up to **6000** ' for SID LINRU 1A, TOGMO 1A.

If unable to maintain the published minimum climb gradient, inform ATC unit.

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

SCALE 1 : 500 000
km5 0 5 10 15km

Close-in obstacle: LAMP POST, DIST is 165m, ELEV 683 '
HANGAR, DIST is 180m, ELEV 670 '
from THR RWY 19.
012°
THR RWY 19 DEPARTURE TRACK
683 '
670 '
NOT TO SCALE

Feet (QNH)	Metres (QFE)
10000	(2860)
9000	(2555)
8000	(2250)
7000	(1945)
6000	(1640)
3300	(815)

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN **FEET**
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

VNUKOVO TOWER
VNUKOVO DEPARTURE 118.300
MOSCOW DEPARTURE 135.175
118.950 118.550 130.375 124.200

PZ - 90.11 coordinates

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 01

STANDARD DEPARTURE CHART
INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: **10000'**

OPALIKHA
109.7 OPH
55 49 31N 037 16 14E

MARYINO
112.5 MRN
55 42 41N 038 13 42E

VNUKOVO
113.7 WNK
55 35 18N 037 15 15E

CHULKOVO
109.2 LP
55 33 10N 038 02 08E

DOMODEDOVO
113.3 DMD
55 23 18N 037 54 42E

KAMENKA
111.6 IKM
55 13 19N 036 59 42E

GLOTAYEVO
113.5 GLW
55 09 46N 037 47 55E

VENEV
335 FV
54 20 44N 038 14 19E

VENEV
108.6 WW
54 20 46N 038 14 19E

MOSCOW

MSA
46km from ARP

3300'

Klyazma

Moskva

Pahra

Nara

Oka

2300'

755'

716'

791'

804'

834'

831'

+11°

UUR280 — 450m/1500' AMSL — GND

UUP53 — FL265 — GND

UUP63 — UNL — GND

UUP52 — UNL — GND

1200m/3900' AGL — GND

400m/1300' AGL — GND

UUR440 — 850m/2800' AMSL — GND

UUP96 — 350m/1200' AMSL — GND

UUP78 — 450m/1500' AMSL — GND

UUR341 — FL140 — GND

UUP95 — 250m/900' AMSL — GND

UUR390 — 2450m/8000' AMSL — GND

UUR370 — 3350m/11000' AMSL — GND

UUP94 — 300m/1000' AMSL — GND

UUR215 — FL980 — FL150

UUR448 — 700m/2300' AMSL — GND

UUP92 — 1200m/4000' AMSL — GND

UUR252 — 900m/3000' AMSL — GND

UUR427 — 700m/2300' AMSL — GND

UUP400 — 900m/3000' AMSL — GND

UUP79 — 600m/2000' AMSL — GND

UUR372 — FL140 — GND

UUR219 — FL980 — FL100

UUR424 — FL120 — GND

UUR366 — FL180 — GND

LIKNI
IAS 425km/h
Bank 20°

KENEP
5000' or above
IAS 465km/h

KANEN
6000' or above
IAS 465km/h

REBRI
IAS 405km/h
Bank 20°

WW191
IAS 405km/h

BITSA
6000'-7000'
IAS 465km/h

GEGNA
7000'-8000'
IAS 465km/h

BIPSI
9000' or above
IAS 465km/h

LIFAS
10000'
IAS 465km/h

ULRON
10000'
IAS 500km/h

SURZA
10000'
IAS 500km/h

BABUT
FL110-FL130
IAS 500km/h

RUDUR
FL110-FL130
IAS 500km/h

BUNZI
FL130-FL150
IAS 500km/h

POZUK
FL140 or above
IAS 500km/h

OMEZA
FL150
IAS 500km/h

RINLO
FL150-FL190
IAS 500km/h

ANEPO
FL170-FL250
IAS 500km/h

LINRU
FL190-FL270
IAS 500km/h

FEGRA
FL170
IAS 500km/h

TOGMO
FL190
IAS 500km/h

079° 11.0
097° 10.8
207° 5.6
260° 11.1
349° 10.5
126° 9.5
161° 18.6
152° 10.0
123° 9.5
108° 20.0
138° 19.1
16.6
LINRU 1C, TOGMO 1C
LINRU 1C 19.3
LINRU 1C 10.0
TOGMO 1C 9.5
LINRU 1C 9.3
LINRU 1C 18.5
TOGMO 1C 31.0
LINRU 1C 18.9
LINRU 1C 18.9
LINRU 1C 20.2
TOGMO 1C 29.6

LINRU 1C, TOGMO 1C

RNAV 1

DME/DME or GNSS is required

NOT TO SCALE

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 3.4% up to **5000'** for SID LINRU 1C, TOGMO 1C.

Feet (QNH)	Metres (QFE)
10000	(2855)
9000	(2555)
8000	(2250)
7000	(1945)
6000	(1640)
5000	(1335)
3300	(815)

If unable to maintain the published minimum climb gradient, inform ATC unit.

SCALE 1 : 500 000
km5 0 5 10 15km

Close-in obstacle: TREE, DIST is 407m, ELEV 711'
LIGHTNING ROD, DIST is 155m, ELEV 667'
from THR RWY 01.

711' 192° DEPARTURE TRACK THR RWY 01 667'

NOT TO SCALE

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN *FEET*
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

VNUKOVO TOWER 118.300
VNUKOVO DEPARTURE 135.175
MOSCOW DEPARTURE 118.950 118.550 130.375 124.200

PZ - 90.11 coordinates

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 19

CHANGE: New chart

STANDARD DEPARTURE CHART INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: ***10000'***

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 06

VNUKOVO TOWER	**118.300**				
VNUKOVO DEPARTURE	**135.175**				
MOSCOW DEPARTURE	**118.950**	**118.550**	**130.375**	**124.200**	

PZ - 90.11 coordinates

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

MSA 46km from ARP: 3300'

MARYINO 112.5 MRN 55 42 41N 038 13 42E

CHULKOVO 109.2 LP 55 33 10N 038 02 08E

DOMODEDOVO 113.3 DMD 55 23 18N 037 54 42E

VNUKOVO 113.7 WNK 55 35 18N 037 15 15E

GLOTAYEVO 113.5 GLW 55 09 46N 037 47 55E

VENEV 335 FV 54 20 44N 038 14 19E

VENEV 108.6 WW 54 20 46N 038 14 19E

UUR440 850m/2800' AMSL GND

UUR390 2450m/8000' AMSL GND

UUR370 3350m/11000' AMSL GND

UUR215 FL980 FL150

UUR372 FL140 GND

UUR219 FL980 FL100

UUR245 FL400 FL360

UUR238 FL360 FL100

UUP53 FL265 GND

UUP52 UNL GND

UUP63 UNL GND

UUP78 450m/1500' AMSL GND

UUP94 300m/1000' AMSL GND

UUP95 250m/900' AMSL GND

UUP96 350m/1200' AMSL GND

UUP79 600m/2000' AMSL GND

UUP92 1200m/4000' AMSL GND

UUP400 900m/3000' AMSL GND

UUR252 900m/3000' AMSL GND

UUR448 700m/2300' AMSL GND

UUR427 700m/2300' AMSL GND

UUR424 FL120 GND

UUR366 FL180 GND

400m/1300' AGL GND

1200m/3900' AGL GND

MOSCOW

Moskva

Oka

Pahra

Nara

755'

716'

653'

703'

804'

834'

831'

+11°

WW061 IAS 405km/h Bank 20°

10.1 051°

112° 13.1

126° 9.5 LINRU 1B, TOGMO 1B

BITSA 6000'-7000' IAS 425km/h

GEGNA 7000'-8000' IAS 465km/h

161° 18.6 LINRU 1B, TOGMO 1B

BIPSI 9000' or above IAS 465km/h

19.3 LINRU 1B, TOGMO 1B

152° 10.0 LINRU 1B

ULRON 10000' IAS 500km/h

9.3 LINRU 1B

RUDUR FL110-FL130 IAS 500km/h

18.5 LINRU 1B

BUNZI FL130-FL150 IAS 500km/h

18.9 LINRU 1B

RINLO FL150-FL190 IAS 500km/h

18.9 LINRU 1B

ANEPO FL170-FL250 IAS 500km/h

20.2 LINRU 1B

LINRU FL190-FL270 IAS 500km/h

123° 10.0

LIFAS 10000' IAS 465km/h

SURZA 10000' IAS 500km/h

9.5 TOGMO 1B

BABUT FL110-FL130 IAS 500km/h

31.0 TOGMO 1B

POZUK FL140 or above IAS 500km/h

108° 20.0 TOGMO 1B

OMEZA FL150 IAS 500km/h

138° 19.1 TOGMO 1B

FEGRA FL170 IAS 500km/h

29.6 TOGMO 1B

TOGMO FL190 IAS 500km/h

LINRU 1B, TOGMO 1B

RNAV 1

DME/DME or GNSS is required

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 7.0% up to ***6000'*** for SID LINRU 1B, TOGMO 1B.

If unable to maintain the published minimum climb gradient, inform ATC unit.

Feet (QNH)	Metres (QFE)
10000	(2860)
9000	(2555)
8000	(2250)
7000	(1945)
6000	(1640)
4500	(1185)
3300	(815)

SCALE 1 : 500 000
km 5 0 5 10 15km

CHANGE: New chart

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN ***FEET***
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

STANDARD DEPARTURE CHART
INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: ***10000'***

OPALIKHA
109.7 OPH
55 49 31N 037 16 14E

VNUKOVO
113.7 WNK
55 35 18N 037 15 15E

KAMENKA
111.6 IKM
55 13 19N 036 59 42E

GLOTAYEVO
113.5 GLW
55 09 46N 037 47 55E

MARYINO
112.5 MRN
55 42 41N 038 13 42E

CHULKOVO
109.2 LP
55 33 10N 038 02 08E

DOMODEDOVO
113.3 DMD
55 23 18N 037 54 42E

VENEV
335 FV
54 20 44N 038 14 19E

VENEV
108.6 WW
54 20 46N 038 14 19E

MOSCOW

Kiyazma

Moskva

Pahra

Nara

Oka

MSA
46km from ARP

+11°

LIKNI
IAS 425km/h
Bank 20°
079° → 11.0

KENEP
5000' or above
IAS 465km/h

KANEN
6000' or above
IAS 465km/h

REBRI
IAS 405km/h
Bank 20°

WW240
IAS 405km/h
Bank 20°

BITSA
6000'-7000'
IAS 465km/h

GEGNA
7000'-8000'
IAS 465km/h

BIPSI
9000' or above
IAS 465km/h

LIFAS
10000'
IAS 465km/h

SURZA
10000'
IAS 500km/h

ULRON
10000'
IAS 500km/h

BABUT
FL110-FL130
IAS 500km/h

RUDUR
FL110-FL130
IAS 500km/h

BUNZI
FL130-FL150
IAS 500km/h

POZUK
FL140-FL150
IAS 500km/h

OMEZA
FL150
IAS 500km/h

RINLO
FL150-FL190
IAS 500km/h

ANEPO
FL170-FL250
IAS 500km/h

FEGRA
FL170
IAS 500km/h

TOGMO
FL190
IAS 500km/h

LINRU
FL190-FL270
IAS 500km/h

097° 10.8
126° 9.5
161° 18.6
123° 10.0
152° 10.0
9.5
31.0
108° 20.0
138° 19.1
29.6
349° 10.5
223° 7.1
259° 7.6
18.9
18.9
20.2
9.3
18.5

LINRU 1D, TOGMO 1D

RNAV 1

DME/DME or GNSS is required

UUR280 450m/1500' AMSL GND
UUP53 FL265 GND
UUP63 UNL GND
UUP52 UNL GND
UUP96 350m/1200' AMSL GND
UUP78 450m/1500' AMSL GND
UUR440 850m/2800' AMSL GND
UUR341 FL140 GND
UUP95 250m/900' AMSL GND
UUP94 300m/1000' AMSL GND
UUR390 2450m/8000' AMSL GND
UUR370 3350m/11000' AMSL GND
UUR215 FL980 FL150
UUR448 700m/2300' AMSL GND
UUR372 FL140 GND
UUP92 1200m/4000' AMSL GND
UUR252 900m/3000' AMSL GND
UUR427 700m/2300' AMSL GND
UUR219 FL980 FL100
UUP400 900m/3000' AMSL GND
UUP79 600m/2000' AMSL GND
UUR424 FL120 GND
UUR366 FL180 GND

1200m/3900' AGL GND
400m/1300' AGL GND

2300' 3300' 755' 716' 804' 834' 791'

SCALE 1 : 500 000
km5 0 5 10 15km

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 3.4% up to ***5000'*** for SID LINRU 1D, TOGMO 1D.

Feet (QNH)	Metres (QFE)
10000	(2840)
9000	(2535)
8000	(2230)
7000	(1925)
6000	(1625)
5000	(1320)
3300	(800)

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

If unable to maintain the published minimum climb gradient, inform ATC unit.

Close-in obstacle: TREE, DIST is 328m, ELEV *701'*
TREE, DIST is 445m, ELEV *704'*
FOREST BORDER, DIST is 599m, ELEV *714'*
FOREST BORDER, DIST is 726m, ELEV *716'*
from THR RWY 06.

DEPARTURE TRACK ← 237°
THR RWY 06
716' 714' 704' 701'

NOT TO SCALE

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN ***FEET***
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

NOT TO SCALE

VNUKOVO TOWER 118.300
VNUKOVO DEPARTURE 135.175
MOSCOW DEPARTURE 118.950 118.550 130.375 124.200

PZ - 90.11 coordinates

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 24

CHANGE: New chart

CHANGE: New chart

STANDARD DEPARTURE CHART
INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: ***10000 '***

BITSA 1A, LIDRI 1A, SOTOG 1A, SUNUN 1A

Feet (QNH)	Metres (QFE)
10000	(2860)
8000	(2250)
7000	(1945)
6000	(1640)
5000	(1335)
3300	(815)
1100	(145)

RNAV 1

DME/DME or GNSS is required

If unable to maintain the published minimum climb gradient, inform ATC unit.

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 5.8% up to ***5000 '*** for SID BITSA 1A, LIDRI 1A, SUNUN 1A;
- 5.1% up to **FL110** for SID SOTOG 1A

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

SUNUN
FL120-FL160
IAS 500km/h

15.0 SUNUN 1A

DAZLA
FL110
IAS 500km/h

11.4 SUNUN 1A

RUBET
10000 '
IAS 500km/h

11.0 SUNUN 1A

316°

ROLAZ
10000 '
IAS 465km/h

247°

LIDRI
FL120-FL160
IAS 500km/h

58.8 LIDRI 1A

18.6 SUNUN 1A, LIDRI 1A

PUFIK
8000 '
IAS 465km/h

9.6 SUNUN 1A, LIDRI 1A

271°

NUZOR
7000 '
IAS 465km/h

10.0 SUNUN 1A, LIDRI 1A

326°

GIGUN
6000 ' or above
IAS 425km/h

11.2 SUNUN 1A, LIDRI 1A

327°

264°

LIKNI
5000 ' or above
IAS 390km/h
Bank 20°

1100 '
IAS 390km/h

027°

357°

8.0 BITSA 1A, SOTOG 1A

117°

WW011
IAS 390km/h
Bank 20°

10.8

110°

9.1 BITSA 1A

WW012
IAS 425km/h
Bank 20°

9.2 SOTOG 1A

205°

WW013
7000 ' or below
IAS 465km/h

9.8 SOTOG 1A

WW014
7000 '-9000 '
IAS 465km/h

10.9 SOTOG 1A

WW015
9000 '-10000 '
IAS 465km/h

10.8 SOTOG 1A

SODLE
FL110 or above
IAS 500km/h

13.1 SOTOG 1A

204°

PIZUR
FL120-FL130
IAS 500km/h

10.0 SOTOG 1A

192°

TITAP
FL130-FL140
IAS 500km/h

18.5 SOTOG 1A

NIDOL
FL150
IAS 500km/h

18.5 SOTOG 1A

LILGA
FL170
IAS 500km/h

11.3 SOTOG 1A

191°

SOTOG
FL180
IAS 500km/h

BITSA
6000 '-7000 '
IAS 465km/h

MSA
46km from ARP

SHEREMETYEVO
114.6 MR
55 58 44N 037 49 41E

OPALIKHA
109.7 OPH
55 49 31N 037 16 14E

VNUKOVO
113.7 WNK
55 35 18N 037 15 15E

KAMENKA
111.6 IKM
55 13 19N 036 59 42E

MOSCOW

UUR320 2150m/*7000 '* AMSL / GND
UUR344 2400m/*7900 '* AGL / GND
UUR344 1200m/*4000 '* AGL / GND
UUR344 3500m/*11500 '* AGL / GND
UUR281 450m/*1500 '* AMSL / GND
UUR317 950m/*3100 '* AMSL / GND
UUP52 UNL / GND
UUP53 FL265 / GND
UUP63 UNL / GND
400m/*1300 '* AGL / GND
UUR438 1200m/*4000 '* AMSL / GND
UUR408 3050m/*10000 '* AMSL / 1850m/*6000 '* AMSL
UUR410 FL200 / 1500m/*5000 '* AMSL
UUR318 700m/*2300 '* AMSL / GND
UUR343 1200m/*4000 '* AMSL / GND
UUP95 250m/*900 '* AMSL / GND
UUP78 450m/*1500 '* AMSL / GND
UUR341 FL140 / GND
UUP72 3200m/*10500 '* AMSL / GND
UUP54 1200m/*4000 '* AMSL / GND
UUP94 300m/*1000 '* AMSL / GND
UUR422 3050m/*10000 '* AMSL / 400m/*1300 '* AMSL
UUR333 850m/*2800 '* AMSL / GND
UUR230 FL200 / 400m/*1300 '* AMSL
UUP59 FL200 / GND
UUR448 700m/*2300 '* AMSL / GND
UUP65 1150m/*3700 '* AMSL / GND
UUP92 1200m/*4000 '* AMSL / GND
UUR418 FL400 / 1850m/*6000 '* AMSL
UUR214 1850m/*6000 '* AMSL / GND
UUR252 900m/*3000 '* AMSL / GND
UUP400 900m/*3000 '* AMSL / GND

Moskva
Ruza
Protva
Nara
Pahra

906 ' 978 ' 949 ' 755 ' 906 ' 896 ' 739 ' 729 ' 689 ' 794 ' 755 ' 693 ' 712 ' 791 ' 850 ' 745 ' 804 ' 801 ' 739 ' 755 ' 794 ' 755 ' 2300 '

+11°

Close-in obstacle: LAMP POST, DIST is 165m, ELEV *683 '*
HANGAR, DIST is 180m, ELEV *670 '*
from THR RWY 19.
012°
THR RWY 19 DEPARTURE TRACK
683 ' *670 '*
NOT TO SCALE

SCALE 1 : 500 000
km5 0 5 10 15km

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN ***FEET***
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

VNUKOVO TOWER 118.300
VNUKOVO DEPARTURE 135.175
MOSCOW DEPARTURE 118.950 118.550 130.375 124.200

PZ - 90.11 coordinates

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 01

TRANSITION ALTITUDE: **10000 '**

BITSA 1C, LIDRI 1C, SOTOG 1C, SUNUN 1C

RNAV 1

DME/DME or GNSS is required

If unable to maintain the published minimum climb gradient, inform ATC unit.

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 3.4% up to **5000** ' for SID BITSA 1C;
- 4.2% up to **5000** ' for SID SOTOG 1C;
- 4.9% up to **5000** ' for SID LIDRI 1C, SUNUN 1C.

Feet (QNH)	Metres (QFE)
10000	(2855)
9000	(2555)
8000	(2250)
7000	(1945)
6000	(1640)
5000	(1335)
3300	(815)
2600	(600)

MSA 46km from ARP

SUNUN FL120-FL160 IAS 500km/h

DAZLA FL110 IAS 500km/h

RUBET 10000 ' IAS 500km/h

ROLAZ 10000 ' IAS 465km/h

PUFIK 8000 ' IAS 465km/h

NUZOR 7000 ' IAS 465km/h

LIDRI FL120-FL160 IAS 500km/h

SUNUN 1C 15.0 — SUNUN 1C 11.4 — SUNUN 1C 11.0 → 316° — 247° — LIDRI 1C 58.8

SUNUN 1C, LIDRI 1C 18.6 — 271° — SUNUN 1C, LIDRI 1C 9.6

SUNUN 1C, LIDRI 1C 10.0 → 326° — 327° — SUNUN 1C, LIDRI 1C 11.2

079° 11.0 — 097° — BITSA 1C 10.8 — BITSA 1C 16.6

349° 10.5 — 260° 11.1 — 207° 14.2 — 183° — SOTOG 1C 16.8

SOTOG 1C 14.0 — 192° — SOTOG 1C 10.0 — SOTOG 1C 18.5 — SOTOG 1C 18.5 — 191° — SOTOG 1C 11.3

201° 5.6

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

❶ **5000** ' or above - for SID LIDRI 1C, SUNUN 1C

GIGUN 6000 ' or above IAS 465km/h

KENEP 5000 ' or above IAS 465km/h

LIKNI ❶ 5000 ' or above IAS 425km/h Bank 20°

REBRI IAS 405km/h Bank 20°

WW191 IAS 405km/h

WW192 2600 ' or above IAS 405km/h

KANEN 6000 ' or above IAS 465km/h

BITSA 7000 ' IAS 465km/h

BAKTO 5000 ' or above IAS 465km/h

PIZUR 6000 ' IAS 465km/h

TITAP 6000 ' IAS 465km/h

NIDOL 8000 ' IAS 465km/h

LILGA 10000 ' or above IAS 465km/h

SOTOG FL110-FL130 IAS 500km/h

SHEREMETYEVO 114.6 MR 55 58 44N 037 49 41E

OPALIKHA 109.7 OPH 55 49 31N 037 16 14E

VNUKOVO 113.7 WNK 55 35 18N 037 15 15E

UUR320 2150m/7000 ' AMSL GND

UUR344 2400m/7900 ' AGL GND

UUR344 1200m/4000 ' AGL GND

UUR344 3500m/11500 ' AGL GND

UUR281 450m/1500 ' AMSL GND

UUR317 950m/3100 ' AMSL GND

UUR438 1200m/4000 ' AMSL GND

UUR408 3050m/10000 ' AMSL 1850m/6000 ' AMSL

UUR410 FL200 1500m/5000 ' AMSL

UUR318 700m/2300 ' AMSL GND

UUR343 1200m/4000 ' AMSL GND

UUR341 FL140 GND

UUR422 3050m/10000 ' AMSL 400m/1300 ' AMSL

UUR333 850m/2800 ' AMSL GND

UUR230 FL200 400m/1300 ' AMSL

UUR418 FL400 1850m/6000 ' AMSL

UUR214 1850m/6000 ' AMSL GND

UUR448 700m/2300 ' AMSL GND

UUR252 900m/3000 ' AMSL GND

UUP52 UNL GND

UUP53 FL265 GND

UUP63 UNL GND

UUP72 3200m/10500 ' AMSL GND

UUP54 1200m/4000 ' AMSL GND

UUP95 250m/900 ' AMSL GND

UUP94 300m/1000 ' AMSL GND

UUP59 FL200 GND

UUP65 1150m/3700 ' AMSL GND

UUP92 1200m/4000 ' AMSL GND

UUP400 900m/3000 ' AMSL GND

UUP78 450m/1500 ' AMSL GND

400m/1300 ' AGL GND

MOSCOW

Moskva

Ruza

Protva

Nara

Pahra

906 ' 896 ' 978 ' 949 ' 755 ' 906 ' 755 ' 755 ' 739 ' 729 ' 689 ' 794 ' 794 ' 755 ' 693 ' 712 ' 791 ' 850 ' 745 ' 804 ' 801 '

Close-in obstacle: TREE, DIST is 407m, ELEV 711 '
LIGHTNING ROD, DIST is 155m, ELEV 667 '
from THR RWY 01.

711 ' 192° DEPARTURE TRACK THR RWY 01 667 '

NOT TO SCALE

SCALE 1 : 500 000
km5 0 5 10 15km

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN **FEET**
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

VNUKOVO TOWER	118.300
VNUKOVO DEPARTURE	135.175
MOSCOW DEPARTURE	118.950 118.550 130.375 124.200

PZ - 90.11 coordinates

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 01

CHANGE: New chart

CHANGE: New chart

STANDARD DEPARTURE CHART
INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: ***10000*** '

BITSA 1B, LIDRI 1B, SOTOG 1B, SUNUN 1B

RNAV 1

DME/DME or GNSS is required

If unable to maintain the published minimum climb gradient, inform ATC unit.

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 3.6% up to ***5000*** ' for SID LIDRI 1B, SUNUN 1B;
- 5.3% up to **FL110** for SID SOTOG 1B;
- 7.0% up to ***6000*** ' for SID BITSA 1B.

Feet (QNH)	Metres (QFE)
10000	(2860)
9000	(2555)
8000	(2250)
7000	(1945)
6000	(1640)
5000	(1335)
3300	(815)

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

SUNUN
FL120-FL160
IAS 500km/h

15.0 SUNUN 1B

DAZLA
FL110
IAS 500km/h

11.4 SUNUN 1B

RUBET
10000 '
IAS 500km/h

11.0 SUNUN 1B

316°

ROLAZ
10000 '
IAS 465km/h

247°

58.8 LIDRI 1B

LIDRI
FL120-FL160
IAS 500km/h

18.6 LIDRI 1B, SUNUN 1B

PUFIK
8000 '
IAS 465km/h

9.6 LIDRI 1B, SUNUN 1B

271°

NUZOR
7000 '
IAS 465km/h

10.0 LIDRI 1B, SUNUN 1B

326°

GIGUN
6000 '-***7000*** '
IAS 465km/h

11.2 LIDRI 1B, SUNUN 1B

327°

LIKNI
6000 ' or above
IAS 465km/h

26.5 LIDRI 1B, SUNUN 1B

305°

SODLE
FL110 or above
IAS 500km/h

13.1 SOTOG 1B

204°

PIZUR
FL120-FL130
IAS 500km/h

10.0 SOTOG 1B

192°

TITAP
FL130-FL140
IAS 500km/h

18.5 SOTOG 1B

NIDOL
FL150
IAS 500km/h

18.5 SOTOG 1B

LILGA
FL170
IAS 500km/h

11.3 SOTOG 1B

191°

SOTOG
FL180
IAS 500km/h

14.1 LIDRI 1B, SOTOG 1B, SUNUN 1B

230°

10.9 SOTOG 1B

205°

10.8 SOTOG 1B

WW015
9000 '-***10000*** '
IAS 465km/h

WW014
5000 ' or above ❸
IAS 465km/h

❶ ***3000*** '-***5000*** ' - for SID BITSA 1B;
❷ ***4500*** '-***7000*** ' - for SID SOTOG 1B;
❸ ***7000*** '-***9000*** ' - for SID SOTOG 1B.

❶ WW061
IAS 405km/h
Bank 20°

10.1 057°

112°

147°

12.0

13.1 BITSA 1B

BITSA
6000 '-***7000*** '
IAS 465km/h

❷ WW062
4500 '-***7000*** '
IAS 405km/h
Bank 20°

SHEREMETYEVO
114.6 MR
55 58 44N 037 49 41E

OPALIKHA
109.7 OPH
55 49 31N 037 16 14E

VNUKOVO
113.7 WNK
55 35 18N 037 15 15E

MOSCOW

UUR320 2150m/*7000* ' AMSL / GND
UUR344 2400m/*7900* ' AGL / GND
UUR344 1200m/*4000* ' AGL / GND
UUR344 3500m/*11500* ' AGL / GND
3300 '
MSA 46km from ARP
UUR281 450m/*1500* ' AMSL / GND
UUR317 950m/*3100* ' AMSL / GND
UUP52 UNL / GND
UUP53 FL265 / GND
400m/*1300* ' AGL / GND
UUP63 UNL / GND
UUR438 1200m/*4000* ' AMSL / GND
UUR408 3050m/*10000* ' AMSL / 1850m/*6000* ' AMSL
UUR410 FL200 / 1500m/*5000* ' AMSL
UUR318 700m/*2300* ' AMSL / GND
UUR343 1200m/*4000* ' AMSL / GND
UUR341 FL140 / GND
UUP95 250m/*900* ' AMSL / GND
UUP78 450m/*1500* ' AMSL / GND
UUP72 3200m/*10500* ' AMSL / GND
UUP54 1200m/*4000* ' AMSL / GND
UUR422 3050m/*10000* ' AMSL / 400m/*1300* ' AMSL
UUR333 850m/*2800* ' AMSL / GND
UUP94 300m/*1000* ' AMSL / GND
UUR230 FL200 / 400m/*1300* ' AMSL
UUP59 FL200 / GND
UUR448 700m/*2300* ' AMSL / GND
UUP65 1150m/*3700* ' AMSL / GND
UUP92 1200m/*4000* ' AMSL / GND
UUR418 FL400 / 1850m/*6000* ' AMSL
UUR214 1850m/*6000* ' AMSL / GND
UUR252 900m/*3000* ' AMSL / GND
UUP400 900m/*3000* ' AMSL / GND

Moskva
Ruza
Protva
Nara
Ugra
Pahra

2300 '
906 ' 896 ' 978 ' 949 ' 755 ' 906 ' 729 ' 689 ' 794 ' 794 ' 755 ' 693 ' 712 ' 739 ' 791 ' 745 ' 764 ' 801 ' 804 '

+11°

SCALE 1 : 500 000
km 5 0 5 10 15km

VNUKOVO TOWER	118.300
VNUKOVO DEPARTURE	135.175
MOSCOW DEPARTURE	118.950 118.550 130.375 124.200

PZ - 90.11 coordinates

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN ***FEET***
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 06

STANDARD DEPARTURE CHART
INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: **10000 '**

BITSA 1D, LIDRI 1D, SOTOG 1D, SUNUN 1D

RNAV 1

DME/DME or GNSS is required

If unable to maintain the published minimum climb gradient, inform ATC unit.

WARNING
The minimum climb gradients are as follows (required due to the airspace structure only):
- 3.6% up to ***5000*** ' for SID BITSA 1D;
- 4.3% up to ***5000*** ' for SID SOTOG 1D;
- 5.3% up to ***5000*** ' for SID LIDRI 1D, SUNUN 1D.

Feet (QNH)	Metres (QFE)
10000	(2840)
9000	(2535)
8000	(2230)
7000	(1925)
6000	(1625)
5000	(1320)
3300	(800)

See all Prohibited and Restricted areas on page AD 2.1 UUWW-56.

+11°

SUNUN
FL120-FL160
IAS 500km/h

15.0 SUNUN 1D

DAZLA
FL110
IAS 500km/h

11.4 SUNUN 1D

RUBET
10000 '
IAS 500km/h

11.0 SUNUN 1D

316°

ROLAZ
10000 '
IAS 465km/h

247°

58.8 LIDRI 1D

LIDRI
FL120-FL160
IAS 500km/h

18.6 LIDRI 1D, SUNUN 1D

PUFIK
8000 '
IAS 465km/h

9.6 LIDRI 1D, SUNUN 1D

271°

NUZOR
7000 '
IAS 465km/h

10.0 LIDRI 1D, SUNUN 1D

326°

❶ ***5000*** ' or above - for SID LIDRI 1D, SUNUN 1D

GIGUN
6000 ' or above
IAS 465km/h

11.2 LIDRI 1D, SUNUN 1D

327°

079° 11.0

LIKNI
❶ ***5000*** ' or above
IAS 425km/h
Bank 20°

097°

10.8 BITSA 1D

KENEP
5000 ' or above
IAS 465km/h

BITSA
7000 '
IAS 465km/h

16.6 BITSA 1D

10.5

349°

7.6

259°

7.1

223°

KANEN
6000 ' or above
IAS 465km/h

REBRI
IAS 405km/h
Bank 20°

183°

WW240
IAS 405km/h
Bank 20°

24.1 SOTOG 1D

BAKTO
5000 ' or above
IAS 465km/h

14.0 SOTOG 1D

PIZUR
6000 '
IAS 465km/h

192°

10.0 SOTOG 1D

TITAP
6000 '
IAS 465km/h

18.5 SOTOG 1D

NIDOL
8000 '
IAS 465km/h

18.5 SOTOG 1D

LILGA
10000 ' or above
IAS 465km/h

191°

11.3 SOTOG 1D

SOTOG
FL110-FL130
IAS 500km/h

SHEREMETYEVO
114.6 MR
55 58 44N 037 49 41E

OPALIKHA
109.7 OPH
55 49 31N 037 16 14E

VNUKOVO
113.7 WNK
55 35 18N 037 15 15E

KAMENKA
111.6 IKM
55 13 19N 036 59 42E

MSA
46km from ARP

MOSCOW

UUR320 2150m/*7000* ' AMSL / GND
UUR344 2400m/*7900* ' AGL / GND
UUR344 1200m/*4000* ' AGL / GND
UUR344 3500m/*11500* ' AGL / GND
UUR281 450m/*1500* ' AMSL / GND
UUR317 950m/*3100* ' AMSL / GND
UUP52 UNL / GND
UUP53 FL265 / GND
UUP63 UNL / GND
UUR438 1200m/*4000* ' AMSL / GND
UUR408 3050m/*10000* ' AMSL / 1850m/*6000* ' AMSL
UUR410 FL200 / 1500m/*5000* ' AMSL
UUR318 700m/*2300* ' AMSL / GND
UUR343 1200m/*4000* ' AMSL / GND
UUR341 FL140 / GND
UUP78 450m/*1500* ' AMSL / GND
UUP95 250m/*900* ' AMSL / GND
UUP94 300m/*1000* ' AMSL / GND
UUP72 3200m/*10500* ' AMSL / GND
UUP54 1200m/*4000* ' AMSL / GND
UUR422 3050m/*10000* ' AMSL / 400m/*1300* ' AMSL
UUR333 850m/*2800* ' AMSL / GND
UUR230 FL200 / 400m/*1300* ' AMSL
UUP59 FL200 / GND
UUR448 700m/*2300* ' AMSL / GND
UUP65 1150m/*3700* ' AMSL / GND
UUP92 1200m/*4000* ' AMSL / GND
UUR418 FL400 / 1850m/*6000* ' AMSL
UUR214 1850m/*6000* ' AMSL / GND
UUR252 900m/*3000* ' AMSL / GND
UUP400 900m/*3000* ' AMSL / GND
400m/*1300* ' AGL / GND

906 ' 896 ' 978 ' 949 ' 755 ' 906 ' 739 ' 729 ' 689 ' 794 ' 794 ' 755 ' 693 ' 712 ' 850 ' 745 ' 804 ' 801 ' 791 ' 755 ' 755 ' 755 ' 2300 ' 3300 '

Moskva
Ruza
Protva
Nara
Pahra

35-50 36-00 36-10 36-20 36-30 36-40 36-50 37-00 37-10 37-20 37-30
56-10 56-00 55-50 55-40 55-30 55-20 55-10 55-00 54-50 54-40

Close-in obstacle: TREE, DIST is 328m, ELEV *701* '
TREE, DIST is 445m, ELEV *704* '
FOREST BORDER, DIST is 599m, ELEV *714* '
FOREST BORDER, DIST is 726m, ELEV *716* '
from THR RWY 06.

DEPARTURE TRACK 237°
THR RWY 06
716 ' 714 ' 704 ' 701 '
NOT TO SCALE

SCALE 1 : 500 000
km5 0 5 10 15km

BEARINGS AND TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS IN ***FEET***
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);
-hPa(mm on req).

VNUKOVO TOWER	118.300
VNUKOVO DEPARTURE	135.175
MOSCOW DEPARTURE	118.950 118.550 130.375 124.200

PZ - 90.11 coordinates

MOSCOW, RUSSIA
VNUKOVO
RNAV RWY 24

CHANGE: New chart