

**ZSNB AD 2.1 机场地名代码和名称 Aerodrome location indicator and name**

ZSNB-宁波/栎社 NINGBO/Lishe

**ZSNB AD 2.2 机场地理位置和管理资料 Aerodrome geographical and administrative data**

1	机场基准点坐标及其在机场的位置 ARP coordinates and site at AD	N29°49.6' E121°27.8' 1250m FM THR 31
2	方向、距离 Direction and distance from city	239°GEO, 10.5km FM city center
3	标高/参考气温 Elevation / Reference temperature	3.7m/35.0℃(JUL)
4	机场标高位置/大地水准面波幅 AD ELEV PSN / geoid undulation	RCL/-
5	磁差/年变率 MAG VAR/ Annual change	4°16'W/
6	机场管理部门、地址、电话、传真、AFS、电子邮箱、网址 AD administration, address, telephone, telefax, AFS, E - mail, website	Ningbo Lishe International Airport Ningbo Lishe International Airport, Ningbo 315154, TEL:86-574-89006326 FAX:86-574-87427089 AFS:ZSNBYDYX Email:nbairport@nbairport.com Website:www.ningbo-airport.com
7	允许飞行种类 Types of traffic permitted(IFR / VFR)	IFR/VFR
8	机场性质/飞行区指标 Military or civil airport &Reference code	CIVIL/4E
9	备注 Remarks	Nil

**ZSNB AD 2.3 工作时间 Operational hours**

1	机场当局(机场开放时间) AD Administration (AD operational hours)	H24
2	海关和移民 Customs and immigration	HS or O/R
3	卫生健康部门	HS or O/R

	Health and sanitation	
4	航行情报服务讲解室 AIS Briefing Office	H24
5	空中交通服务报告室 ATS Reporting Office (ARO)	H24
6	气象讲解室 MET Briefing Office	H24
7	空中交通服务 ATS	H24
8	加油 Fuelling	H24
9	地勤服务 Handling	H24
10	保安 Security	H24
11	除冰 De-icing	H24
12	备注 Remarks	Nil

#### ZSNB AD 2.4 地勤服务和设施 Handling services and facilities

1	货物装卸设施 Cargo-handling facilities	Tow tractor, fork-lift, baggage transporter, dolly, container dolly
2	燃油/滑油牌号 Fuel/oil types	Nr.3 jet fuel --
3	加油设施/能力 Fuelling facilities/capacity	tank vehicle ( 35000 litres, 45000 litres, 49000 litres, 65000 litres ): 20 litres/ sec;hydrant dispenser(20 litres/ sec, for stands Nr.17-26)
4	除冰设施 De-icing facilities	de-icer, deicing fluid(KHF-1, cleanwing-I, cleanwing-II)
5	过站航空器机库 Hangar space for visiting aircraft	Nil
6	过站航空器的维修设施 Repair facilities for visiting aircraft	Line maintenance available on request for A319, A320, A321, B737-300/500/700/800, B757-200, CRJ-200; A319/320/321 APU change

7	备注 Remarks	Ground power unit, ground air supply unit, ground air preconditioning unit, towing truck, maintenance platform truck
---	---------------	--

**ZSNB AD 2.5 旅客设施 Passenger facilities**

1	宾馆 Hotels	At AD
2	餐馆 Restaurants	At AD
3	交通工具 Transportation	Passenger's coaches, taxis, subway
4	医疗设施 Medical facilities	At AD
5	银行和邮局 Bank and Post Office	At AD
6	旅行社 Tourist Office	Nil
7	备注 Remarks	Nil

**ZSNB AD 2.6 援救与消防服务 Rescue and fire fighting services**

1	机场消防等级 AD category for fire fighting	CAT 8
2	援救设备 Rescue equipment	Fire fighting facilities: foam tender, water tank truck, demolition rescue truck, illumination truck, chemical supply tender, medicament reinforcement car; Rescue equipments: mobile surface operation devices, steel plate, tightwire, towing truck for B767, B757, B747, A330, A340, EMB145, EMB190, CRJ200, B737-300/600/700/800, A319-100, A320-200, A321, MD82, MD90, corporate aircraft Rescue bandage for B757, A319/320/321, corporate aircraft
3	搬移受损航空器的能力 Capability for removal of disabled aircraft	MTWA up to A320-200
4	备注 Remarks	Nil

**ZSNB AD 2.7 可用季节- 扫雪 Seasonal availability-clearing**

1	可用季节及扫雪设备类型 Types of clearing equipment	All seasons Spreading vehicle, snow blower, snow pusher, snow removing plate
2	扫雪顺序 Clearance priorities	RWY, TWY, Apron
3	备注 Remarks	Nil

### ZSNB AD 2.8 停机坪、滑行道及校正位置数据 Aprons, taxiways and check locations data

1	停机坪道面和强度 Apron surface and strength	Surface: CONC	Strength: PCN 86/R/B/W/T(stands Nr.305-312) PCN 78/R/B/W/T(stands Nr.17-26, 17A, 17B, 17C) PCN 66/R/B/W/T(stands Nr.2-16) PCN 62/R/B/W/T(stands Nr.313-318, 326-332)
2	滑行道宽度、道面和强度 Taxiway width, surface and strength	Width: 42m: B13; 39m: B7-B10; 34m: A3 ( N of TWY A ) , A4, A5; 28.5m: A1, A7, K1; 23m: A, B;	Surface: CONC Strength: PCN 86/R/B/W/T(B, B7-B9) PCN 78/R/B/W/T(B13) PCN 66/R/B/W/T(A, A1, A3( N of TWY A ) , A4, A5, A7, B10, K1)
3	高度表校正点的位置及其标高 ACL location and elevation	Nil	
4	VOR/INS 校正点 VOR/INS checkpoints	Nil	
5	备注 Remarks	Nil	

### ZSNB AD 2.9 地面活动引导和管制系统与标识 Surface movement guidance and control system and markings

1	航空器机位号码标记牌、滑行道引导线、航空器目视停靠引导系统的使用 Use of aircraft stand ID signs, TWY guide lines and visual docking / parking	Taxiing guidance signs at all intersections of TWY and RWY and at all holding positions. Guide lines at apron. Nose-in guidance for aircraft stands.
---	--	--

	guidance system of aircraft stands	Visual docking guidance system at stands Nr.2-7, 305-318.	
2	跑道和滑行道标志及灯光 RWY and TWY marking and LGT	RWY markings	THR, RWY designations, TDZ, center line, edge line, aiming point
		RWY lights	Center line, edge line, THR, RWY end, wing bar
		TWY markings	Center line, edge line, intermediate holding positions, RWY holding position, TWY shoulders
		TWY lights	Center line, edge line, intermediate holding positions, RWY guard lights
3	停止排灯 Stop bars	Nil	
4	备注 Remarks	Nil	

## ZSNB AD 2.10 机场障碍物 Aerodrome obstacles

Obstacles within a circle with a radius of 15km centered on the center of ARP						
序号 Seria Nr.	障碍物类型(*代表有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞航径区 Flight procedure / take-off flightpath area affected	备注 Remarks
1	*TWR	017	1920	49	Circling CAT A/B	
2	*TWR	038	2820	49		
3	BLDG	057	10112	165		
4	BLDG	060	11427	188		
5	BLDG	061	10001	145		
6	BLDG	063	9926	164		
7	BLDG	063	10071	139		
8	BLDG	064	10472	178		
9	BLDG	065	10267	147		
10	BLDG	075	14641	266		
11	BLDG	092	7795	173		
12	BLDG	096	7996	173		
13	BLDG	105	8036	171		

Obstacles within a circle with a radius of 15km centered on the center of ARP						
序号 Seria Nr.	障碍物类型(*代表 有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞 航径区 Flight procedure / take - off flightpath area affected	备注 Remarks
14	BLDG	107	7790	228		
15	BLDG	108	7697	168		
16	GP Antenna	121	1028	20.3		
17	Light Pole	127	2288	18	RWY13 take-off path	
18	Antenna	128	2181	16	RWY13 take-off path	
19	TWR	132	3002	22		
20	*TWR	179	552	45	RWY31 VOR/DME、GP INOP final approach	
21	MT	272	10502	270		
22	MT	276	12686	537	RWY13 ILS/DME missed approach	
23	MT	287	10108	277		
24	MT	289	10716	342	RWY13 VOR/DME final approach; Circling CAT D	
25	*TWR	292	3413	46	RWY13 VOR/DME final approach	
26	Contour line	294	9217	100	Circling CAT C	
27	MT	298	14154	416		
28	MT	306	14851	497.7	RWY31 departure; RWY31 take-off path	
29	Light Pole	308	2873	18	RWY31 take-off path	
30	TWR	308	5248	41	RWY13 GP INOP final approach	
31	BLDG	309	2924	18	RWY31 take-off path	
32	MT	309	14097	447		
33	BLDG	310	2493	12	RWY31 take-off path	

Obstacles within a circle with a radius of 15km centered on the center of ARP						
序号 Seria Nr.	障碍物类型(*代表 有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞 航径区 Flight procedure / take - off flightpath area affected	备注 Remarks
34	BLDG	311	2559	14	RWY31 take-off path	
35	Antenna	312	1591	20.2	RWY13 ILS/DME final approach	
36	MT	313	10463	195	RWY13 GP INOP final approach; RWY31 take-off path	
37	MT	313	12647	369	RWY13 GP INOP final approach	
Others:						

Obstacles between two circles with the radius of 15km and 50km centered on the center of ARP						
序号 Seria Nr.	障碍物类型(*代表 有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞 航径区 Flight procedure / take - off flightpath area affected	备注 Remarks
1	MT	015	28143	436		
2	MT	016	18416	294		
3	MT	066	48388	456		
4	MT	080	26675	388		
5	MT	096	30537	673		
6	MT	097	41175	542		
7	BLDG	107	32068	546		
8	MT	115	27778	556		
9	MT	125	15018	160	RWY31 VOR/DME,GP INOP final approach	
10	MT	133	19649	465		

Obstacles between two circles with the radius of 15km and 50km centered on the center of ARP						
序号 Seria Nr.	障碍物类型(*代表 有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞 航径区 Flight procedure / take - off flightpath area affected	备注 Remarks
11	MT	136	23747	497		
12	MT	138	20019	465		
13	MT	140	19886	505		
14	BLDG	140	29438	643		
15	BLDG	143	29282	644		
16	MT	144	21353	536	RWY31 ILS/DME,VOR/DME intermediate approach	
17	BLDG	144	25436	696		
18	BLDG	145	25013	696		
19	BLDG	145	25235	712	RWY31 VOR/DME,ILS/DME initial approach; RWY31 RNP ILS/DME intermediate approach	
20	BLDG	146	28593	652		
21	BLDG	147	27949	656		
22	MT	148	25500	635		
23	MT	148	45961	551		
24	MT	185	24922	615		
25	MT	195	41631	764		
26	MT	204	33920	712		
27	MT	218	30183	810		
28	MT	225	42898	746		
29	MT	234	45610	930		
30	MT	252	28960	976		
31	MT	264	35952	896		



Obstacles between two circles with the radius of 15km and 50km centered on the center of ARP						
序号 Seria Nr.	障碍物类型(*代表 有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞 航径区 Flight procedure / take - off flightpath area affected	备注 Remarks
32	MT	265	23739	800		
33	MT	280	34082	777		
34	MT	281	16042	521		
35	MT	281	41533	649		
36	MT	289	18586	602	RWY31 ILS/DME,RNP ILS/DME,GP INOP,VOR/DME missed approach	
37	MT	291	29559	650	RWY13 VOR/DME,ILS/DME initial approach	
38	MT	293	22032	538		
39	MT	298	15994	521	RWY13 ILS/DME,RNP ILS/DME intermediate approach	
40	MT	298	18216	573		
41	MT	298	31747	638		
42	MT	298	39479	435		
43	TWR	300	18739	598	RWY13 ILS/DME,RNP ILS/DME intermediate approach	
44	MT	301	21580	452		
45	MT	303	18103	535		
46	MT	304	16103	431		
47	MT	306	18591	515		
48	MT	308	15681	513		
49	MT	308	16915	466		

Obstacles between two circles with the radius of 15km and 50km centered on the center of ARP						
序号 Seria Nr.	障碍物类型(*代表 有灯光) Obstacle type(*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞 航径区 Flight procedure / take - off flightpath area affected	备注 Remarks
50	TWR	313	42104	291		
51	TWR	313	42166	243		
52	TWR	332	44390	239		
53	MT	337	31295	446		
54	MT	353	29594	431		
Others:						
Other obstacles refer to AD OBST Chart.						

**ZSNB AD 2.11 提供的气象信息、机场观测与报告****Meteorological information provided & aerodrome observations and reports**

1	相关气象台的名称 Associated MET Office	Ningbo ATMB MET Office
2	气象服务时间；服务时间以外的责任气象台 Hours of service, MET Office outside hours	H24
3	负责编发 TAF 的气象台；有效时段；发布间隔 Office responsible for TAF; preparation, Periods of validity; Interval of issuance	Ningbo ATMB MET Office 9 HR, 24HR
4	着陆预报类型、发布间隔 Type of landing forecast, Interval of issuance	Trend 1 HR
5	所提供的讲解/咨询服务 Briefing/consultation provided	T, P
6	飞行文件及其使用语言 Flight documentation, Languages used	Chart, International MET Codes, Abbreviated Plain Language Text Ch, En
7	讲解/咨询服务时可利用的图表和其它信息 Charts and other information available for briefing or consultation	Synoptic charts, significant weather charts, upper W/T charts, satellite and radar material, AWOS real-time data

8	提供信息的辅助设备 Supplementary equipment available for providing information	FAX, MET Service Terminal
9	提供气象情报的空中交通服务单位 ATS units provided with information	Ningbo Tower
10	观测类型与频率/自动观测设备 Type & frequency of observation/Automatic observation equipment	Hourly plus special observation/Yes
11	气象报告类型及所包含的补充资料 Type of MET Report & supplementary information included	METAR, SPECI, TEND
12	观测系统及位置 Observation System & Site(s)	RVR EQPT A: 100m E of RCL,440m inward THR13 B: 100m E of RCL,310m inward THR31 SFC wind sensors 13: 106m E of RCL,446m inward THR 31: 90m W of RCL,320m inward THR Ceilometer 60m S of RCL extension line,306m outside THR31; 4m S of RCL extension line,1000m outside THR31;
13	气象观测系统的工作时间 Hours of operation for meteorological observation system	H24
14	气候资料 Climatological information	Climatological tables AVBL
15	其他信息 Additional information	Nil

**ZSNB AD 2.12 跑道物理特征 Runway physical characteristics**

跑道号码 Designations RWY NR	真方位和磁方位 TRUE & MAG BRG	跑道长宽 Dimensions of RWY(m)	跑道强度(PCN), 跑道道面/ 停止 道道面 RWY strength (PCN), RWY surface / SWY surface	着陆入口坐标及 高程异常 THR coordinates and geoid undulation	跑道入口标高,精密进近 跑道接地带最高标高 THR elevation and highest elevation of TDZ of precision APP RWY
--------------------------------	------------------------------	---------------------------------	---	---	---

1	2	3	4	5	6
13	124 °GEO 128 °MAG	3200×45	66/R/B/W/T CONC/-	Nil	THR3.7m TDZ3.7m
31	304 °GEO 308 °MAG	3200×45	66/R/B/W/T CONC/-	Nil	THR3.7m TDZ3.7m
跑道-停止道坡度 Slope of RWY - SWY	停止道长宽 SWY dimensions(m)	净空道长宽 CWY dimensions(m)	升降带长宽 Strip dimensions(m)	无障碍物区 OFZ	跑道端安全区长宽 RWY end safety area dimensions(m)
7	8	9	10	11	12
0%	Nil	Nil	3320×300	Nil	225×150
0%	Nil	Nil	3320×300	Nil	225×150
Remark: 60×60m anti-blast pad (asphalt concrete) on the both ends of RWY.					

## ZSNB AD 2.13 公布距离 Declared distances

跑道号码 RWY Designator	可用起飞滑跑距离 TORA(m)	可用起飞距离 TODA(m)	可用加速停止距离 ASDA(m)	可用着陆距离 LDA(m)	备注 Remarks
1	2	3	4	5	6
13	3200	3200	3200	3050	THR displaced 150m inwards
31	3200	3200	3200	3200	Nil
Remarks:					

## ZSNB AD 2.14 进近和跑道灯光 Approach and runway lighting

跑道 代号 RWY Designator	进近灯 类型、 长度、 强度 APCH LGT type LEN INTST	入口灯 颜色、 翼排灯 THR LGT colour WBAR	目视进近坡 度指示系统( 跑道入口最 低眼高), 精 密进近航道 指示器 VASIS (MEHT) PAPI	接地地带 灯长度 TDZ LGT LEN	跑道中心线灯 长度、间隔、 颜色、强度 RWY Center line LGT LEN, spacing, colour, INTST	跑道边灯长 度、间隔、颜 色、强度 RWY edge LGT LEN, spacing, colour, INTST	跑道末端 灯颜色 RWY end LGT colour	停止道灯 长度、颜 色 SWY LGT LEN, colour
1	2	3	4	5	6	7	8	9

跑道 代号 RWY Designator	进近灯 类型、 长度、 强度 APCH LGT type LEN INTST	入口灯 颜色、 翼排灯 THR LGT colour WBAR	目视进近坡 度指示系统( 跑道入口最 低眼高), 精 密进近航道 指示器 VASIS (MEHT) PAPI	接地地带 灯长度 TDZ LGT LEN	跑道中心线灯 长度、间隔、 颜色、强度 RWY Center line LGT LEN, spacing, colour, INTST	跑道边灯长 度、间隔、颜 色、强度 RWY edge LGT LEN, spacing, colour, INTST	跑道末端 灯颜色 RWY end LGT colour	停止道灯 长度、颜 色 SWY LGT LEN, colour
13	PALS CAT I* 900m LIH	GREEN Yes	PAPI LEFT/3 °	Nil	3200m** spacing 30m	3200m*** spacing 60m	RED	Nil
31	PALS CAT I* 900m LIH	GREEN Yes	PAPI LEFT/3 °	Nil	3200m** spacing 30m	3200m*** spacing 60m	RED	Nil
Remarks:*SFL ** 0-2300m White VRB LIH, 2300-2900m Red/White VRB LIH, 2900-3200m Red VRB LIH *** 0-2600m White VRB LIH, 2600-3200m Yellow VRB LIH								

### ZSNB AD 2.15 其它灯光,备份电源 Other lighting, secondary power supply

1	机场灯标/识别灯标位置、特性和工作时间 ABN/IBN location, characteristics and hours of operation	Nil
2	着陆方向标/风向标位置和灯光 LDI/WDI location and LGT	WDI: 13:90m N of RCL, 320m inward THR, Lighting; 31:90m S of RCL, 320m inward THR, Lighting.
3	滑行道边灯和中线灯 TWY edge and center line lighting	All TWYs
4	备份电源/转换时间 Secondary power supply/switch-over time	Dual feed, diesel engine driven generator / 15 sec
5	备注 Remarks	Nil

### ZSNB AD 2.16 直升机着陆区域 Helicopter landing area

1	TLOF 坐标或 FATO 入口坐标及大地水准面波幅 Coordinates TLOF or THR of FATO Geoid undulation	Nil
2	TLOF 和/或 FATO 标高 (m/ft) TLOF and/or FATO elevation (m)	Nil
3	TLOF 和 FATO 区域范围、道面、强度和标志 TLOF and FATO area dimensions,surface, strength, marking	Nil
4	FATO 的真方位和磁方位 True and MAG BRG of FATO	Nil
5	公布距离 Declared distance available	Nil
6	进近灯光和 FATO 灯光 APP and FATO lighting	Nil
7	备注 Remarks	Nil

### ZSNB AD 2.17 空中交通服务空域 ATS airspace

名称 Designation	水平范围 Lateral limits	垂直范围 Vertical limits	备注 Remarks
Ningbo tower control area	A circuit, 2 arcs with radius 13km centered at center of both RWY ends and 2 parallel lines of 13km FM RCL.	SFC-1200m MSL	
Altimeter setting region and TL/TA	N300456 E1211619- N294501 E1205854- N292600 E1210643- N301509 E1214543-An arc with a radius of 30NM centered on Ningbo VOR(NGB).	TL 3600m TA 3000m 3300(QNH $\geq$ 1031hPa) 2700(QNH $\leq$ 979hPa)	3000m(QNH) or below: by ATC

### ZSNB AD 2.18 空中交通服务通信设施 ATS communication facilities

服务名称 Service Designation	呼号 Call sign	频率 Frequency (MHz)	工作时间 Hours of operation	备注 Remarks
1	2	3	4	5
ATIS		126.45	H24	
APP	Ningbo Approach	125.45(119.55)	H24	
TWR	Ningbo Tower	118.35(130.0,118.7)	H24	
GND	Ningbo Ground	121.95	H24	

### ZSNB AD 2.19 无线电导航和着陆设施 Radio navigation and landing aids

设施名称和类型 Name and type of aid	识别 ID	频率 Frequency	发射天线位置、坐标 Antenna site coordinates	DME 发射天线标高 Elevation of DME transmitting antenna	备注 Remarks
1	2	3	4	5	6
Ningbo VOR/DME	NGB	116.3MHz CH110X	N29°49.8' E121°27.8' 331°MAG/ 493m FM ARP	9m	
Andong VOR/DME	AND	114.8MHz CH95X	N30°15.4' E121°13.3'	5m	For VOR: R294°R306° clockwise U/S. For VOR: BTN 11.5-15.5NM on R185°U/S.
Lishe NDB	BK	227kHz	N29°53.7' E121°20.0' 306°MAG/ 14877m FM ARP		For arrival and departure procedure: 11-15.5NM on bearing 093 U/S, 8-10NM on bearing 241 U/S, 8-13.5NM and 16-17.5NM and 18.5-19.5NM on bearing 291 U/S; for holding procedure: 12-14NM on bearing

设施名称和类型 Name and type of aid	识别 ID	频率 Frequency	发射天线位置、坐标 Antenna site coordinates	DME 发射天线标 高 Elevation of DME transmitting antenna	备注 Remarks
					241 °U/S; for departure procedure: 2-3.5NM on bearing 145 °U/S; for initial approach procedure: on bearing 286 °U/S.
LOC 13 ILS CATI	IBK	108.9MHz	128 °MAG /290m FM end RWY 13		Beyond -22 ° of front course U/S.
GP 13		329.3MHz	120m N of RCL, 289m inward displaced THR		Angle 3.22 ° RDH 16.6m Coverage 10NM
DME 13	IBK	CH26X (108.9MHz)		9m	Co-located with GP 13
LOC 31 ILS CATI	ILL	110.9MHz	308 °MAG / 290m FM end RWY 31		Beyond +27 ° of front course U/S.
GP 31		330.8MHz	120m N of RCL, 304m inward THR		Angle 3 ° RDH 16.6m Coverage 10NM
DME 31	ILL	CH46X (110.9MHz)	123m N of RCL, 304m inward THR	9m	Co-located with GP 31

**ZSNB AD 2.20 本场飞行规定****ZSNB AD 2.20 Local traffic regulations****1. 机场使用规定****1. Airport operations regulations**

1.1 所有训练飞行和技术试飞需事先申请, 并在得到空中交通管制部门批准后方可进行;

1.1 Each and every training and technical test flight shall be filed in advance and shall be made only after clearance has been obtained from ATC;

1.2 可用最大机型: B747 同类及其以下机型。

1.2 Maximum aircraft to be available: B747 and



equivalent.

### 1.3 应答机使用注意事项:

### 1.3 Notice for using transponder:

1.3.1 落地航空器脱离跑道后, 应将应答机设置为地面模式: 空客系航空器设置为“XPNDR”模式; 波音系航空器设置为“STANDBY”模式; 其他机型航空器应参照执行。

1.3.1 After landing aircraft vacate RWY, set transponder to ground mode; set Airbus aircraft to "XPNDR" mode; set Boeing aircraft to "STANDBY" mode; Other types aircraft shall carry out.

1.3.2 离场航空器在到达跑道外等待点前, 应将应答机设置为地面模式: 空客系航空器设置为“XPNDR”模式; 波音系航空器设置为“STANDBY”模式; 其他机型航空器应参照执行。

1.3.2 Set transponder to ground mode before departure aircraft reaching the runway holding point, set Airbus aircraft to "XPNDR" mode; set Boeing aircraft to "STANDBY" mode; Other types aircraft shall carry out.

1.3.3 离场航空器在收到进跑道指令后应将应答机设置为空中模式。

1.3.3 After departure aircraft receive the enter RWY instruction, set transponder to air mode.

1.4 机组应根据机型及进近方式, 检查机场运行最低标准, 若不能满足时应及时报告管制员。

1.4 Aircrew shall according to aircraft types and approach mode, check the aerodrome operating minima, pilot shall inform ATC if can not fulfill the aerodrome operating minima.

## 2. 跑道和滑行道的使用

## 2. Use of runways and taxiways

2.1 可以通过现场指挥中心申请拖车服务;

2.1 Towing service is available via Ground Control;

2.2 禁止航空器在滑行道和机坪滑行通道上做180°转弯;

2.2 180°turnaround on TWY and apron taxilane is forbidden for all aircraft;

2.3 对机组的要求:

2.3 Flight crew requirements:

2.3.1 飞行机组应认真听取并重复地面管制员的滑行指令,按指定的滑行路线滑行。发现问题及时证实。

2.3.1 Flight crew shall listen carefully, repeat and follow the taxi clearances given by ATC. IF there is any question, confirm in time.

2.3.2 推出前,机组应向地面管制员证实使用的跑道和推出方向。

2.3.2 Flight crew shall confirm the RWY in use and the taxiing direction before pushed-back.

#### 2.4 滑行道使用限制/Taxiing limits

滑行道/TWY	航空器翼展限制/ Wing span limits for aircraft
T1, T3, B6, L1, L2	≤65m
K1, T2	≤52m
S1	≤36m

2.5 本场 A、A1、A3 (A 滑以北)、K1、A4、A5、A7、B10、B13 滑行道增补面按 B747-400 为最大机型设计, B777、A340-600、B747-8 机型在上述滑行道运行时需采用偏置转弯方式滑行。其它滑行道增补面按 A340-600 为最大机型设计。

2.5 Maximum aircraft of supplementary surface of TWY A, A1, A3 (N of A), K1, A4, A5, A7, B10, B13 is B747-400. Aircraft B777, A340-600 and B747-8 shall offset TWY centerline while turning. Maximum aircraft of other supplementary surface of TWYs is A340-600.

#### 2.6 掉头线限制/Turning guidance marking limits:

掉头线位置/Turning guidance marking	主起落架外轮外侧边间距限制/Outside distance limits of main landing gear outer wheel	机身长度限制/ Fuselage limits	鼻轮转向角限制/Steering angle of front wheels limits
RWY31 end	≤12.6m	≤70.67m	≤59°
RWY13 end	≤9m	≤47.32m	≤48.52°

Intersection BTN TWYA3/K1 and RWY	≤10.9m	≤54.94m	≤48.19°
--------------------------------------	--------	---------	---------

2.7 跑道运行原则:

2.7 General rules for using runways:

2.7.1 起飞航空器:

2.7.1 For departure aircraft:

2.7.1.1 起飞航空器从接到管制员进跑道指令到对正跑道时间应控制在 60s 以内,并能够立即执行起飞指令。如机组认为无法在上述要求的时间内完成,须在到达跑道外等待点之前向塔台管制员说明(湿跑道或污染跑道除外)。

2.7.1.1 Departure aircraft shall finish runway alignment within 60 seconds after receiving ATC instructions of entering runway; If flight crew consider that they can not fulfill the process within the required time, pilot shall inform TWR ATC controller before reaching the runway holding point(except for wet or contaminated RWY).

2.7.1.2 起飞航空器使用 13 号跑道时,离地后需保持跑道方向,联系宁波进近后听管制员雷达引导。

2.7.1.2 Departure aircraft use RWY13, keep the RWY direction after departure, contact APP ATC controller.

2.7.2 落地航空器:

2.7.2 For landing aircraft:

2.7.2.1 落地航空器应尽快退出跑道,从接地到滑出跑道时间应控制在 60s 以内,如机组认为无法在上述要求的时间内完成,须在首次联系塔台时向管制员说明(湿跑道或污染跑道除外)。

2.7.2.1 Aircraft shall fully vacate runway within 60 seconds after touching down; If flight crew consider that they can not fulfill the process within the required time, pilot shall inform TWR ATC controller at first contact(except for wet or contaminated RWY).

2.7.2.2 落地航空器应尽快退出跑道,脱离跑道后

2.7.2.2 Landing aircraft shall vacate the RWY as

应及时向塔台管制员报告已脱离跑道和脱离所使用的滑行道。

soon as possible, then inform TWR ATC controller.

2.7.3 在转换跑道运行方向过程中,短时使用跑道顺风分量大于 3m/s,但不大于 5m/s 时,管制员应将该信息通知相关航空器驾驶员。航空器驾驶员根据机型性能或运行手册,决定是否使用管制员安排的顺风跑道起飞或着陆,并将决定告知管制员。

2.7.3 When aircraft change direction of runway in use, if downwind speed is more than 3m/s and not exceeding 5m/s for short time, ATC controller shall inform flight crew. According to aircraft performance or operation handbook, pilot shall decide whether aircraft will take off or land on downwind runway allocated, then inform ATC controller.

2.8 机动区冲突多发地带运行要求:

2.8 Hot spot procedure:

2.8.1 参照 ZSNB AD2.24-1,2。

2.8.1 Refer to ZSNB AD2.24-1,2.

2.9 在申请推出前确保飞机已完全准备好且牵引车已经挂好。获得推出指令后必须在 2min 内执行,若超时则管制指令自动失效,需要重新申请。

2.9 Aircrew shall make sure that aircraft has been ready and tractor has been hung up before applying for the push-back clearance. Aircrew must push-back after acquiring the clearance within 2 mins. Otherwise, the clearance is invalid and need applied again.

### 3. 机坪和机位的使用

### 3. Use of aprons and parking stands

3.1 未经空中交通管制部门同意,严禁航空器利用自身动力倒滑。航空器在机坪上活动必须经空管部门同意后,方可按指定的滑行路线滑行、牵移。

3.1 Aircraft push-back on its own power without ATC clearance is strictly forbidden. Aircraft taxiing and push-back on apron shall follow ATC clearance strictly.

3.2 航空器发动机试车需经塔台和指挥中心许可,

3.2 Engine run-ups are subject to Tower Control and

并在 G 滑行道以东的 A 滑行道和 23 至 26 号机位区域试车点进行, 严禁在其他区域试车, 试车时间是 21:00 至 16:00(UTC)。

Command Center clearance, and may only be carried out between TWY A(east of TWY G) and stands Nr.23-26 from 21:00 to 16:00(next day). Other areas are strictly forbidden.

### 3.3 机位使用限制/Limits for aircraft parking on the following stands:

停机位/Stands	航空器翼展限制(m)/ Wing span limits for aircraft	机身长度限制(m)/ Fuselage limits	滑入、滑出方式/ Enter or exit
309-311	<65	≤75.36	Taxi in/Push-back
3、17、18	<65	≤70.67	Taxi in/Push-back
19、20、308、312	<52	≤61.6	Taxi in/Push-back
8、9	≤47.57	≤53.61	Taxi in/Push-back
2、4-6、21-26	<36	≤46.5	Taxi in/Push-back
326-332	<36	≤46.5	Taxi in/Taxi out
7、10-16、305-307、 313-318	<36	≤44.5	Taxi in/Push-back
17A、17B、17C	<24	≤29.87	Taxi in/Push-back

### 3.4 组合机位的使用模式/Use of combined stands:

组合机位群/ Combined stands	组合模式/ Combined mode	模式包含机位及使用限制/ Stands included in use mode and limits			
		机位/ Stand	翼展限制/ Wing span limits	机身长度限制/ Fuselage limits	滑进、滑出方式 / Enter or exit
17,17A, 17B,17C	17	17	<65m	≤70.67m	Taxi in/Push-back
	17A,17B,17C	17A	<24m	≤29.87m	
		17B	<24m	≤29.87m	

		17C	<24m	≤29.87m	Taxi in/ Taxi out
	17A,17B	17A	<24m	≤29.87m	
		17B	<24m	≤29.87m	

3.5 为降低碳排放及噪音,305-318 停靠廊桥机位的航空器必须关闭 APU,使用 400Hz 桥载电源及飞机专用空调设备。以下特殊情况除外:

3.5 All aircrafts parking on boarding bridge stands shall turn off APU and use bridge equipment (400Hz) and special air conditioning. Except for the following circumstances:

3.5.1 服务方不能够提供有效的桥载设备服务;

3.5.1 Bridge equipment is unavailable;

3.5.2 航空器因启动发动机而需开启 APU;

3.5.2 Aircraft needs APU to start up engine;

3.5.3 航空器进行 APU 的维修检测活动;

3.5.3 APU is under maintenance;

3.5.4 遇到影响航班安全、正常运行的特殊情形,例如极端天气、专机保障、航班过站时间不足等有关情况。

3.5.4 In case of exceptional circumstances influencing the operation safety, such as extreme weather, special plane support, insufficient flight transition time.

4. 进、离场管制规定

4. Air traffic control regulations

无

Nil

5. 机场的 II/III 类运行

5. CAT II/III operations at AD

无

Nil

6. 除冰规则

6. Rules for deicing

无

Nil

**7. 平行跑道同时仪表运行****7. Simultaneous operations on parallel runways**

无

Nil

**8. 警告****8. Warning**

无

Nil

**9. 直升机飞行限制，直升机停靠区****9. Helicopter operation restrictions and helicopter parking / docking area**

无

Nil

**ZSNB AD 2.21 噪音限制规定及减噪程序****ZSNB AD 2.21 Noise restrictions and Noise abatement procedures**

无

Nil

**ZSNB AD 2.22 飞行程序****ZSNB AD 2.22 Flight procedures****1. 总则****1. General**

除经塔台特殊许可外，在塔台管制区内的飞行，必须按照仪表飞行规则进行。

Flights within Tower Control Area shall operate under IFR unless special clearance has been obtained from Tower Control.

**2. 起落航线****2. Traffic circuits**

起落航线在跑道西南侧进行，C、D类航空器高度600m，A、B类航空器高度300m。

Traffic circuits shall be made to the southwest of runway, at the altitude of 600m for aircraft CAT C/D, and 300m for aircraft CAT A/B.

**3. 仪表飞行程序****3. IFR flight procedures**

严格按照航图中公布的进、离场程序和 ENR2.2.3 中公布的有关规定飞行。如果需要,航空器可在空中交通管制部门指定的航路、导航台或定位点上空等待或做机动飞行。

Strict adherence is required to the relevant arrival/departure procedures published in the aeronautical charts and the relevant regulations published in subsection ENR2.2.3. Aircraft may, if necessary, hold or maneuver on an airway, over a navigation facility or a fix designated by ATC.

#### 4. 雷达程序和/或 ADS-B 程序

#### 4. Radar procedures and/or ADS-B procedures

4.1 宁波进近管制区域内实施雷达管制。航空器最小水平间隔为 6km, 最小垂直间隔为 300m。

4.1 Radar control within Ningbo APP Control Area has been implemented. The minimum horizontal radar separation is 6km, the minimum vertical radar separation is 300m.

#### 5. 无线电通信失效程序

#### 5. Radio communication failure procedures

##### 5.1 航空器通信失效

##### 5.1 Aircraft communication failure

5.1.1 如果航空器具备信号接收能力,根据接收到的管制指令继续飞行;

5.1.1 If the radio receiver available, aircraft shall follow the instruction to fly.

5.1.2 如果航空器不具备信号接收能力,航空器应按照进近程序继续进近并尽快落地;如果本场不具备落地条件,飞行员可自行决定返航或者备降;

5.1.2 If the radio receiver not available, aircraft shall continue to landing with approach procedure as soon as possible; If condition of airports not available for landing, the flight crew should decide to return or alternate by themselves;

##### a. 向 13 号着陆

##### a. landing to RWY13

航空器按照最后接收到的管制员指令高度(如果低于 1800m 则上升至 1800m)飞向所许可的仪表进近

Aircraft fly to the IF point of the permitted IAP according to the last command ALT (climb to 1800m



程序中间进近定位点 IF,进入等待程序盘旋下降后按照 13 号跑道仪表进近程序着陆;

if not reached), then join the holding procedure, descend to loss altitude and then approach and land according to RWY 13 instrument approach procedure;

**b.向 31 号着陆**

**b. landing to RWY31**

航空器按照最后接收到的管制员指令高度(如果低于 1800m 则上升至 1800m)飞向 NGB 台,进入等待程序盘旋下降后按照 31 号跑道仪表进近程序着陆;

Aircraft fly to 'NGB' VOR according to the last command ALT (climb to 1800m if not reached), then join the holding procedure, descend to loss altitude and then approach and land according to RWY 31 instrument approach procedure;

**5.1.3 未收到管制进场航线指令,不得使用须经管制员许可的进场航线。**

**5.1.3 Arrival procedures requiring ATC clearance are not available without ATC clearance.**

**5.2 本场通信失效**

**5.2 Aerodrome communication failure**

本场通信失效本场无线电收发功能失效,航空器无法与管制单位建立有效的通讯联系时,航空器应联系上一管制单位,并按照接收管制单位的管制指令继续飞行;

If aircraft cannot establish communication with the aerodrome control unit, aircraft shall contact the previous control unit, and follow the instruction to continue;

**5.3 无线电通信恢复**

**5.3 Radio communication resume to normal**

失去通信联络的航空器已经着陆,或者已经恢复联络的,可恢复正常的管制运行,并立即通知相关管制单位。

It is available to resume activities when the aircraft that lose touch via Communication Channel has landed or get in touch again. Inform the ATC office immediately.

**6. 目视飞行程序**

**6. Procedures for VFR flights**

无

Nil

**7. 目视飞行航线****7. VFR route**

无

Nil

**8. 目视参考点****8. Visual reference point**

无

Nil

**9. 其它规定****9. Other regulations**

无

Nil

**10. 区域导航飞行程序相关数据****10. Data for RNAV flight procedures**

## Waypoint Coordinates

Waypoint ID	COORDINATES	Waypoint ID	COORDINATES
NB104	N295813E1211237	NB301	N294622E1214438
NB105	N300306E1210405	NB302	N295500E1220000
NB106	N300431E1211249	NB303	N294508E1212414
NB107	N295341E1210914	NB304	N293536 E1212648
NB108	N294939E1210436	NB305	N294554E1210931
NB109	N294924E1211646	NB306	N294729E1212008
NB203	N294152E1214114	NB307	N295355E1212010
NB204	N293721E1213750	AND	N3015.4E12113.3
NB205	N294005E1213303	HSN	N2955.9E12221.8
NB206	N294224E1212901	NGB	N2949.8E12127.8
NB207	N295947E1210217	SHZ	N2936.0E12049.0
NB208	N295818E1210326	BK	N2953.7E12120.0
NB209	N295418E1214236	SUPAR	N3001.4E12051.5

RWY13 SID Navigation database coding table

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (km/h)	VPA/TCH	Navigation Specification
AND-61X								
CA			128		200			RNP1
DF	NB306			R	1500	MAX350		RNP1
TF	NB109				1800			RNP1
TF	NB107							RNP1
TF	NB105							RNP1
TF	AND							RNP1
AND-63X(by ATC)								
CA			128		200			RNP1
DF	NB306			R	1500	MAX350		RNP1
TF	NB109				1800			RNP1
TF	NB307				by ATC			RNP1
TF	AND							RNP1
AND-65X(by ATC)								
CA			128		350			RNP1
CF	NB209		031	L	by ATC	MAX350		RNP1
TF	AND							RNP1
HSN-61X								
CA			128		200			RNP1
DF	NB306			R	1500	MAX350		RNP1
TF	NB109				1800			RNP1
TF	NB107							RNP1
TF	NB104							RNP1
TF	NB307				3000			RNP1

TF	NB209				3000			RNP1
TF	NB302				3000			RNP1
TF	HSN				3000			RNP1
HSN-63X(by ATC)								
CA			128		350			RNP1
CF	NB209		031	L	by ATC	MAX350		RNP1
TF	NB302				3000			RNP1
TF	HSN							RNP1
SHZ-61X(by ATC)								
CA			128		200			RNP1
DF	NB304			R	by ATC	MAX350		RNP1
TF	SHZ							RNP1
SHZ-63X								
CA			128		200			RNP1
DF	NB306			R	1500	MAX350		RNP1
TF	NB109				1800			RNP1
TF	SHZ							RNP1
SUP-61X								
CA			128		200			RNP1
DF	NB306			R	1500	MAX350		RNP1
TF	NB109				1800			RNP1
TF	NB107							RNP1
TF	SUPAR							RNP1

RWY31 SID Navigation database coding table

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (km/h)	VPA/TCH	Navigation Specification
-----------------	-------------	----------	---------------------	----------------	--------------	------------	---------	--------------------------

AND-62X								
CF	NB307		308		↑650			RNP1
TF	NB104							RNP1
TF	NB105							RNP1
TF	AND					MAX350		RNP1
AND-64X(by ATC)								
CF	NB307		308		↑650			RNP1
TF	AND					MAX350		RNP1
HSN-62X								
CF	NB307		308		↑650			RNP1
TF	NB104							RNP1
TF	NB107					MAX350		RNP1
TF	NB109							RNP1
TF	NB307				3000			RNP1
TF	NB209				3000			RNP1
TF	NB302				3000			RNP1
TF	HSN				3000			RNP1
HSN-64X(by ATC)								
CF	NB307		308		↑650			RNP1
TF	NB109				by ATC	MAX350		RNP1
TF	NB303				by ATC			RNP1
TF	NGB				by ATC			RNP1
TF	NB209				3000			RNP1
TF	NB302				3000			RNP1
TF	HSN				3000			RNP1
SHZ-62X								
CF	NB307		308		↑650			RNP1

TF	NB104							RNP1
TF	NB107					MAX350		RNP1
TF	SHZ							RNP1
SUP-62X								
CF	NB307		308		↑650			RNP1
TF	NB208					MAX350		RNP1
TF	SUPAR							RNP1

RWY13 STAR Navigation database coding table

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (km/h)	VPA/TCH	Navigation Specification
AND-51F								
IF	AND							RNP1
TF	NB105				1500	MAX380		RNP1
AND-53F(by ATC)								
IF	AND							RNP1
TF	NB106				1500	MAX380		RNP1
HSN-51F								
IF	HSN							RNP1
TF	NB302				2700			RNP1
TF	NB209				2700			RNP1
TF	NB307				2700			RNP1
TF	NB109				↑1800	MAX380		RNP1
HSN-53F(by ATC)								
IF	HSN							RNP1
TF	NB302				2700			RNP1
TF	NB209				2700			RNP1

TF	NGB				by ATC			RNP1
TF	NB303				by ATC			RNP1
TF	NB109				↑1800	MAX380		RNP1
SHZ-51F								
IF	SHZ							RNP1
TF	NB108				1800	MAX380		RNP1
SUP-51F								
IF	SUPAR							RNP1
TF	NB207				1500	MAX380		RNP1

RWY13 Transition Navigation database coding table

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (km/h)	VPA/TCH	Navigation Specification
AND-51F								
TF	NB105				1500	MAX380		RNP1
TF	NB104				↑1000			RNP1
AND-53F(by ATC)								
TF	NB106				1500	MAX380		RNP1
TF	NB104				↑1000			RNP1
HSN-51F,HSN-53F(by ATC)								
TF	NB109				↑1800	MAX380		RNP1
TF	NB107				1500			RNP1
TF	NB104				↑1000			RNP1
SHZ-51F								
TF	NB108				1800	MAX380		RNP1
TF	NB107				1500			RNP1
TF	NB104				↑1000			RNP1

SUP-51F								
TF	NB207				1500	MAX380		RNP1
TF	NB104				↑1000			RNP1

RWY31 STAR Navigation database coding table

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (km/h)	VPA/TCH	Navigation Specification
AND-52F								
IF	AND							RNP1
TF	NB105							RNP1
TF	NB107							RNP1
TF	NB109							RNP1
TF	NB306				1500			RNP1
TF	NB206				1200			RNP1
TF	NB205				1200	MAX380		RNP1
AND-54F(by ATC)								
IF	AND							RNP1
TF	NB307				by ATC			RNP1
TF	NB109							RNP1
TF	NB306				1500			RNP1
TF	NB206				1200			RNP1
TF	NB205				1200	MAX380		RNP1
AND-56F(by ATC)								
IF	AND							RNP1
TF	NB209				by ATC			RNP1
TF	NB301				1200	MAX380		RNP1
HSN-52F								



IF	HSN							RNP1
TF	NB302				2700			RNP1
TF	NB209				2700			RNP1
TF	NB307				2700			RNP1
TF	NB104							RNP1
TF	NB107							RNP1
TF	NB109							RNP1
TF	NB306				1500			RNP1
TF	NB206				1200			RNP1
TF	NB205				1200	MAX380		RNP1
HSN-54F(by ATC)								
IF	HSN							RNP1
TF	NB302				2700			RNP1
TF	NB301				1200	MAX380		RNP1
SHZ-52F								
IF	SHZ							RNP1
TF	NB305				↑1800			RNP1
TF	NB109							RNP1
TF	NB306				1500			RNP1
TF	NB206				1200			RNP1
TF	NB205				1200	MAX380		RNP1
SHZ-54F(by ATC)								
IF	SHZ							RNP1
TF	NB304				1800	MAX380		RNP1
SUP-52F								
IF	SUPAR							RNP1
TF	NB107							RNP1

TF	NB109							RNP1
TF	NB306				1500			RNP1
TF	NB206				1200			RNP1
TF	NB205				1200	MAX380		RNP1

RWY31 Transition Navigation database coding table

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (km/h)	VPA/TCH	Navigation Specification
AND-52F,AND-54F(by ATC),HSN-52F,SHZ-52F,SUP-52F								
TF	NB205				1200	MAX380		RNP1
TF	NB204							RNP1
TF	NB203				↑1100			RNP1
AND-56F(by ATC),HSN-54F(by ATC)								
TF	NB301				1200	MAX380		RNP1
TF	NB203				↑1100			RNP1
SHZ-54F(by ATC)								
TF	NB304				1800	MAX380		RNP1
TF	NB204							RNP1
TF	NB203				↑1100			RNP1

RWY13 Holding Navigation database coding table

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (km/h)	VPA/TCH	Navigation Specification
Holding (outbound time 1 minute)								
HM	NB104	Y	128° (inbound angle)	R	1200	MAX400		RNP1
HM	NB108	Y	049°	L	by ATC	MAX400		RNP1

			(inbound angle)					
--	--	--	--------------------	--	--	--	--	--

RWY31 Holding Navigation database coding table

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (km/h)	VPA/ TCH	Navigation Specification
Holding (outbound time 1 minute)								
HM	NB203	Y	308° (inbound angle)	R	by ATC	MAX400		RNP1
HM	NB305	Y	065° (inbound angle)	L	by ATC	MAX400		RNP1

**ZSNB AD 2.23 其它资料****ZSNB AD 2.23 Other information**

鸟类主要活动情况见下表，机场当局采取了驱赶措施，以减少鸟群活动。

Mainly activities of bird flocks are described in the following table. Aerodrome Authority resorts to dispersal methods to reduce bird activities.

Type of bird	Activity period	Flight altitude(m)	Activity habit
aigret	From end of June to beginning of October	0-30	bevy
night heron	From end of June to beginning of October	0-30	solo or little bevy
snipe	March to May, August to September	0-20	bevy
sparrow	Whole year	0-10	bevy

skylark	November to February(Next year)	0-30	bevy
swallow	April to August	0-20	solo or little bevy
kestrel	October to March(Next year)	0-200	solo
turtledove	Whole year	0-20	pair or little bevy