



# **NAMIBIAN CIVIL AVIATION AUTHORITY**

Advisory Pamphlet (AP)

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## **DETERMINING ATS PERSONNEL REQUIREMENTS**

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3. **Effective date:** 13 May 2020



**Mr. Reinhard Gärtner**  
**Interim Executive Director of Civil Aviation**

## **DETERMINING ATS PERSONNEL REQUIREMENTS**

### **1. PURPOSE**

This Advisory Pamphlet (AP) provides guidance to ATS providers on ATS personnel recruitment and progression. It provides information on the method to be used for determining the number of ATS personnel, their recruitment and progression to meet the requirements of the NAMCARs, Part 172 and the associated technical standards.

### **2. BACKGROUND**

- (a) The NAM-CARs Parts 172 requires an ATS provider to develop a procedure for determining the required number of ATS personnel and for their recruitment and progression.
- (b) NAM-CATs Part 172 further requires an ATS provider to engage, employ or contract an adequate number of ATS personnel to provide air traffic services and at ATS units listed in its manual of procedures.
- (c) Below are the extracts from the Civil Aviation Regulations Part 172 – Air traffic services provider, to which this Advisory Pamphlet apply.

### **3. EXTRACTS FROM NAM-CARS, PART 172 – AIR TRAFFIC SERVICES**

#### **172.03.3 Personnel requirements**

- (1) An ATS provider must engage, employ or contract adequate, competent and qualified personnel as required under Part 170., to provide the air traffic service.
- (2) An ATS provider must establish a procedure for determining the required number of ATS personnel and the procedures for their recruitment and progression.

## DETERMINING ATS PERSONNEL REQUIREMENTS

### 1. Determination of number of personnel

- 1.1 Manpower planning is essential to ensure that there is always sufficient trained staff available to meet the demands of the service. Such planning must forecast future manpower requirements for at least five years. In planning for manpower requirements acquisition of reliable data is necessary. Personnel requirements may be determined by a study based on a comprehensive assessment of the duties to be performed.
- 1.2 A properly balanced workload scheme may be used to justify the number of personnel and also to protect against the overloading of any particular work position.
- 1.3 Air traffic services (ATS) provision requires speedy and prompt action in all fields of operation. Such action may be required to be performed at high pressure during peak hours while action may slacken off during other times of the day or night. As a result of such variations in the activity patterns, an ATS provider must define a "peak man-hour" and the amount of work which can be performed by one person in an average peak hour.
- 1.4 ATS workload schemes shall where possible, be based on these peak man-hours. The purpose of the workload system is to provide a basis, but not necessarily a rigid yardstick:
  - (a) for the assessment of the number of staff required at each unit,
  - (b) to identify periods of significant activities at units, and
  - (c) to ensure that adequate safety margins are maintained.
- 1.5 Should it be found that over-loading becomes a frequent occurrence, a review must be conducted to determine which modifications of working arrangements or facilities are needed to provide relief, or whether additional staff is required. In some cases, such a review may also indicate that, by appropriate modifications of the working

arrangements, savings in manpower are possible. Seasonal variations in traffic may have significant effects upon the workload, but these may be anticipated and provided for by manpower scheduling or other management action.

1.6 To convert the abstract requirement for the provision of specific services into the number of days of operation from which the number of controllers required to provide that service can be calculated, the following method may be used:

- (a) determine the number of days of facility operation based on a general calculation of expected controller utilization or availability. This calculation should be based on a statistical mean and will give only an average figure;
- (b) determine the average number of days during which the average controller is away from the facility. Days away from the facility should include days off duty, leave, sick leave, absence for advanced training and any other cause;
- (c) the information on the number of days of facility operation and average number of days a controller is away from the facility should then be inserted into a formula in order to obtain the number of controllers required to provide the service in question in the course of a year.

An example of such a formula is described here below:

	Number of days a position is in operation	Number of functional hours* per year
	_____	_____
Personnel needed =	X	
	Number of days of operation of the facility per year	Average number of hours worked per year by a controller**

\* "Functional hours" means the hours when the position is occupied plus time for hand over.

\*\* The "average number of hours" worked per year by a controller is obtained by subtracting from the days of the year the number of days the average controller is away from the facility. This figure is then multiplied by the average number of working hours per day of a controller.

- 1.7 As duty at some positions is more fatiguing than at others, supervisors shall, at their discretion, rotate staff during their shifts between heavily loaded and more lightly loaded positions.
- 1.8 When making a workload study of any operating position, sector or unit, the study must be related to an hour-by-hour loading and must not be confined to only one day's operations. A more representative result will be obtained if the study covers a week or longer period. The arithmetic average of the workload values obtained for individual hours may then be plotted. However, any exceptionally busy day or other shorter period may be plotted separately if it appears desirable to make this occurrence more outstanding.
- 1.9 Workload studies may be made in support of all proposals to change the staffing whenever such a proposal is based on work-loading. Otherwise, studies must be made when it is believed that overloading is occurring with some regularity or that the functions of two or more positions may be combined without compromising safety or creating overloading of the so combined new position.
- 1.10 In conducting workload studies, the assessment team must include a controller who is experienced in controlling traffic in the area under review but not personally involved in the control function.
- 1.11 The ATS authority may in consultation with the ICAO Regional Office, obtain details of other methods developed by other States for determining capacity.

## **2. Recruitment of ATS personnel**

- 2.1 The requirements for issuing ATS licences and ratings are prescribed in Part 65, ATC Personnel Licensing.
- 2.2 Selection methods should follow established interviewing techniques requiring both written and oral examination. Psychological aptitude and manipulative tests must be undertaken and the candidates must be medically examined in

accordance with the requirements in NAM-CARs Part 65 as part of the selection process.

2.3 Because of the special nature of the ATS, persons selected for service in ATS require considerable training before they can qualify for a licence. Such training is a costly process, making it necessary to have arrangements whereby a candidate, who is unable to reach a satisfactory standard of performance within set time limits, may have his employment terminated. Most ATS personnel are civil servants and their initial employment contract provides for a period of probation during which they can be dismissed or reassigned. In general, such action will be taken only for misconduct or negligence. However, in the case of ATC trainees the unsuitability for retention results more likely from temperament, slow reaction time or inability to anticipate, visualize and analyse complex situations. Special arrangements therefore need to be made in their contracts to cover this eventuality.

2.4 During the probationary period, in addition to classroom instruction, candidates must be tested on the job by assigning them to units where they should perform supplementary duties assisting the controller, but under continuous supervision. In this way, the candidate will gain confidence and the employer can assess his potential and possibly take corrective action before a loss of confidence occurs. This on-the-job training is the most significant element of the training process and the ability to handle people firmly but compassionately should therefore be a major criterion in the selection of supervisory personnel.

### **3. Career progression**

3.1 Service with the ATS is a career in itself, but as ATS personnel become more skilled, some of them are likely to be assigned management responsibilities. ATS personnel must therefore be given the opportunity to attend varying levels of management and administrative courses to provide a career structure through to top management positions. Individual assessments of progress, together with the on-the-job assessments, will permit an ATS personnel the opportunity to demonstrate fitness for promotion, and also allow management to have a broader group from which to select possible candidates for management

positions. A good controller is not likely to automatically become a good supervisor unless he is given adequate training and opportunity.

- 3.2 Once a candidate has qualified for an ATS licence, he shall be required to obtain a rating, qualifying him to work at a specific ATS unit. A basic grade controller must undergo advanced ATS techniques to compete for positions of higher responsibility and also to ensure that a pool of qualified staff is always available to meet normal staff attrition.
- 3.3 Because of the special work involved in ATS and the comparatively high qualifications and skills required in the exercise of this profession, ATS personnel must have terms and conditions of employment and promotion prospects which are related solely to ATS work and are as independent as possible of the normal career structure.