

**SECTION 5**

**DIVING AND SLIDE**

**EQUIPMENT CRITERIA**

## DIVING AND SLIDE CRITERIA

Readers are advised to consult the ISRM publication 'Diving in Swimming Pools' and Volume 2 of these standards, in conjunction with these notes.

- In the interests of safety, it is recommended by SPATA that the profile drawings set out in **Cage of Safety** diagram, be accepted by the prospective client.
- **Diving equipment shall be installed and used only in accordance with the criteria set out in these Standards and as specified by the various international and national authorities.**
- There shall be no underwater protrusions, extensions, means of entanglement or other obstructions that can entrap a bather.
- In commercial pools where there is no specific diving pool, any area with a water depth of less than 1.5m should be isolated by means of removable float/barriers.

*Note. Whilst these recommendations impose no legal liability whatsoever upon the prospective installing contractor, any departure from these recommendations must be on the clients specific written instructions and accepted entirely at the clients own risk.*

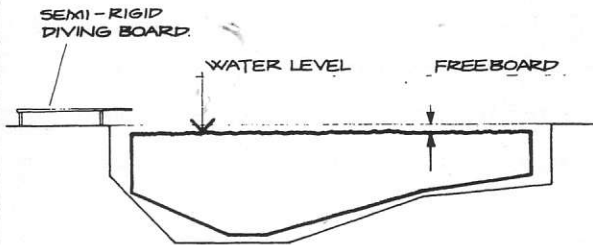
**IMPORTANT: STANDARDS HAVE BEEN PRODUCED FOR YOUR PROTECTION  
AS WELL AS FOR YOUR CLIENT'S SAFETY.**

### Categories of Diving for Swimming Pools

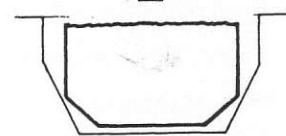
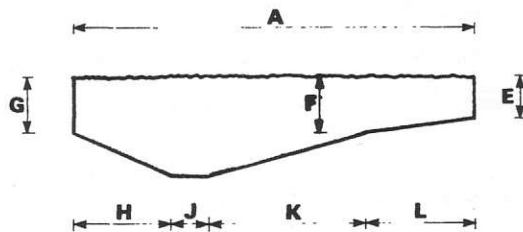
<b>Category 1</b>	0.5 metre semi rigid diving board	for domestic pools (see 'Cage of Safety' diagram)
<b>Category 2</b>	0.5 metre semi rigid diving board	for smaller public pools (hotels, clubs, schools, holiday camps)
<b>Category 3</b>	1.0 metre semi rigid diving board <b>OR</b> 1.0 metre rigid diving platform	for smaller public pools (hotels, clubs, schools, camps)
<b>Category 4</b>	1.0 metre spring board	for all pools from private to public – but Because of demanding minimum standards It is usually impractical in private pools on grounds of cost
<b>Category 5</b>	All spring boards and diving Platforms above 1.0m in height	for installation only in senior sports clubs and public authority pools – and in most cases, only on a separate diving pool within the complex

## MINIMUM DIMENSIONS OF THE "CAGE OF SAFETY" FOR THE APPROPRIATE CATEGORY OF DIVING

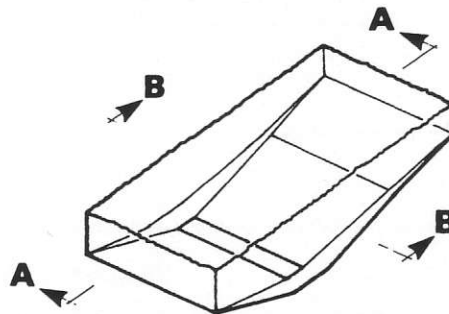
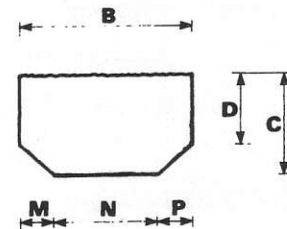
THE "CAGE OF SAFETY" IS A BODY OF WATER WITHIN THE POOL INTO WHICH IT IS SAFE TO DIVE FROM THE DIVING BOARD. THE PROFILE OF THE POOL MAY BE ANY SHAPE OR SIZE PROVIDED IT CONTAINS THE MINIMUM DIMENSIONS OF THE "CAGE OF SAFETY."



**SECTION A-A**



**SECTION B-B**



- ALL DIMENSIONS ARE FOR THE BODY OF WATER FORMING THE "CAGE OF SAFETY."
- THE FIGURE UNDER CATEGORY OF BOARD, EG. 1/2 M INDICATES MAX. HEIGHT OF BOARD ABOVE THE WATER.
- THE DEEP END OF THE "CAGE OF SAFETY" MUST ALWAYS START FROM THE END OF THE DIVING BOARD.

CATEGORY OF DIVING BOARD.	USE OF POOL.	MINIMUM DIMENSIONS IN FEET. (METRES.)													
		A	B	C	D	E	F	G	H	J	K	L	M	N	P
SEMI-RIGID BOARD 1/2 M	RESIDENTIAL	28.0 (8.53)	12.0 3.66	7.0 2.13	5.0 1.52	3.0 0.91	4.0 1.22	4.0 1.22	7.0 2.13	2.5 0.76	11.0 3.35	7.5 2.28	2.5 0.76	7.0 2.13	2.5 0.76
DITTO	SEMI PUBLIC (HOTELS, CLUBS SCHOOLS ETC.)	30.0 9.14	14.0 4.27	8.0 2.44	5.0 1.52	3.0 0.91	5.0 1.52	4.0 1.22	6.25 1.91	4.0 1.22	9.0 2.74	10.75 3.28	3.5 1.07	7.0 2.13	3.5 1.07
SEMI-RIGID BOARD OR FIXED PLATFORM 1 M	DITTO	32.0 9.75	16.0 4.88	8.5 2.59	5.0 1.52	4.0 1.22	5.5 1.68	5.0 1.52	6.0 1.82	8.0 2.44	6.5 1.98	11.5 3.50	3.0 0.91	10.0 3.05	3.0 0.91

**Categories of Diving for Swimming Pools (cont ...)**

Minimum recommended water depth at deepest point within the 'Cage of Safety' for the pool:

<b>Category 1</b>	-	2.13m (7ft 0in)
<b>Category 2</b>	-	2.44m (8ft 0in)
<b>Category 3</b>	-	2.59m (8ft 6in)
<b>Category 4</b>	-	3.00m (9ft 10 ½ in)
<b>Category 5</b>	-	As per ASA Regulations for each board (3m spring, and 5 and 10m Diving platforms)

All the following measurements for the respective 'Cage of Safety' are based on diving taking place ONLY from the respective diving board.

**Cage of Safety**

The 'Cage of Safety' is an area of water of sufficient size and depth within the deep end of a pool of minimum dimensions that allows normal deck level diving with safety. Irrespective of the shape or profile of the pool, the 'Cage of Safety' shall be maintained.

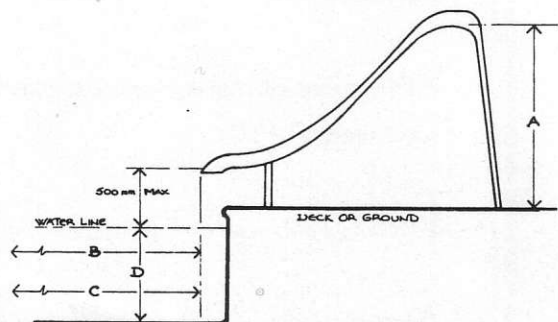
**Slide Safety Requirements (for slides not exceeding 2m in height)**

For slides exceeding 2m in height refer to BS1069.1996

- 'A' dimension shall be the height of slide above the deck or ground on which the slide rests.
- 'B' dimension is the distance that the minimum depth of water shall be maintained. This distance shall be equal to one and one half times the height of the slide ( $B=1.5xA$ ).
- 'C' dimension is the minimum distance of water that shall be maintained in front of the end of the slide. This distance shall be equal to two times the height of the slide. ( $C=2xA$ ).
- 'D' dimension is the minimum depth of water.

As the angle of incidence of the slide is critical this must be a variable.

- Additional study is being made of the required minimum depth and therefore no Standard is laid down at this time. It is recommended that the manufacturers advice be sought on this and that advice adhered to.



### **Water Depth Markings**

- Pool depths of water shall be correctly, clearly and conspicuously marked in metric units.
- Metric measurements shall be marked for 1 place of decimals. Water depths below 1.0m shall show a zero before the decimal point.
- Except for depths of less than 1.0m, where the markings may need to be more frequent, the depth of water shall be marked at each end of the pool; at sudden changes of depth; and elsewhere at each increase of 0.3m.
- The additional use of symbols, words or other methods of indicating depths, providing the meaning is clear and conspicuous.

### **DIVING SAFETY REQUIREMENTS – PUBLIC POOLS**

#### *Information Notes*

- TUS recommend no diving shall be permitted in public swimming pools. Separate diving pits should be provided for diving activity.
- In public pools where diving facilities already exist, provision should be made to allow only one activity to take place at a time.

### **Diving Equipment – Fixed Board and Spring Board**

#### **Commercial**

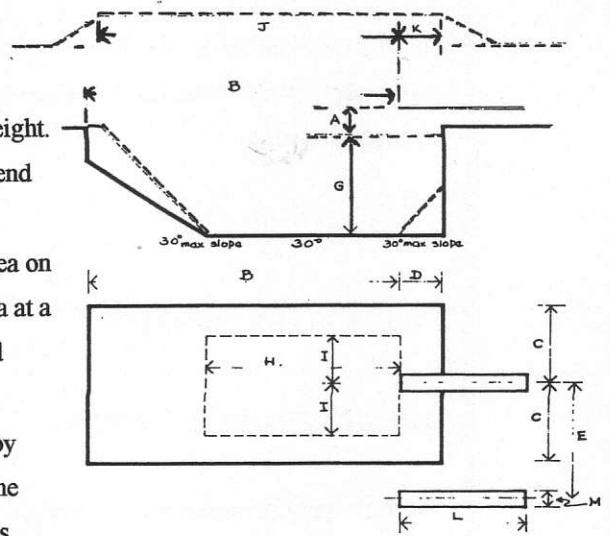
- *Competition pools* – diving equipment shall be in accordance with the Standards laid down by ASA and FINA.
- *Public pools* – diving equipment shall be installed in public pools in accordance with the requirements of TUS.
- *Teaching pools* – no diving equipment permitted.
- *Domestic pools* – diving equipment and slides shall be designed and installed in accordance with the diagrams from Section 5 (Cage of Safety and Slide).

**Diving Safety Requirements – Public Pools**

**COMPETITION DIVING POOL MINIMUM DIMENSIONS**

ASA recommendations per TUS DATA sheet

- This drawing is extracted from the Sports Council, TUS Bulletin 1, Public Indoor Swimming Pools including TUS Data Sheet 4 with amendments from TUS handbook.
- $A \pm 0.1$  metre tolerance is permissible on nominal board height. All dimensions should relate to a central point at the front end of the diving board(s).
- The tabled depth should be maintained inside the dotted area on the plan and the floor may be sloped outside the dotted area at a maximum 30° degree angle. The floor should not be sloped towards the board end of the pool.
- Designers should consider the current standards specified by FINA (Federation Internationale de Natation Amateur) if the pool is to be used for National/International standard events.



	Spring boards		Fixed boards	
	m	m	m	m
<b>A</b> Board height above water	1.0	3.0	5.0	10.0
<b>B</b> Clearance forward	7.5	9.0	10.25	13.5
<b>C</b> Clearance sides	2.5	3.5	3.8	4.5
<b>D</b> Clearance behind	1.5	1.5	1.25	1.5
<b>E</b> Centre of adjoining board	2.5	2.5	2.5	2.5
<b>F</b> Clearance overhead	4.6	4.6	3.0	3.4
<b>G</b> Depth of water at plummet	3.0	3.5	3.8	4.5
<b>H</b> Depth maintained forward	5.3	6.0	6.0	10.5
<b>I</b> Depth maintained at sides	2.2	2.7	3.0	3.0
<b>J</b> Distance in front of plummet over which Height F is maintained	5.0	5.0	5.0	6.0
<b>K</b> Distance to each side of and behind plummet over which height F is maintained	2.75	2.75	2.75	2.75
<b>L</b> Length of board	4.8	4.8	5.0	6.0
<b>M</b> Width of board	0.5	0.5	2.0	2.0

Consider ASA variable profiles for fixed diving boards.

### **Enclosed Pool Clearances**

There shall be no obstruction extending from the wall or the floor into the clear area of the diving or sliding portion of the pool. There shall be an unobstructed clearance in the case of recreational diving boards of 3m above the board. This area shall extend at least 2.5m behind, 2.5m to each side, and 5m ahead.

Public pools with diving facilities exceeding 3m in height, or pools designed for high platform diving, shall comply with international and national dimensions (see ASA and FINA regulations and TUS recommendations).

### **SAFETY IS THE PRIORITY**

#### Leisure activities can be dangerous.

The swimming pool area must be designed to suit the use or activity, especially where recreational diving and sliding is involved. Pools for the general public must be supervised: strict design standards apply to competitive diving, activity accessories such as sliding or fluming and wave making, and to hygiene controls.

Although modern design of facilities may be highly satisfactory, it is nearly always the misuse of equipment and provisions that causes accidents.

It is the responsibility of the pool owner or pool management to prevent accidents by appropriate planning and by providing effective supervision at all times. Pools when not in use need to be securely locked.

Refer also to the relevant sections of the Health and Safety at Work etc Act Volume 2.