



SPECIFICATIONS FOR SQUASH COURTS

RECOMMENDED STANDARDS
APPROVED BY THE WSF

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CURRENT JANUARY 2016

**WORLD
SQUASH**

WSF

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A BRIEF INTRODUCTION TO THE GAME OF SQUASH

Squash is believed to have evolved from the game of Rackets at Harrow School around 1830. Rackets is a game played with a hard ball on a concrete court about twice the length of a squash court and Squash was invented when the pupils discovered that a punctured Rackets ball, which "squashed" on impact with the wall, produced a game with a greater variety of shots and required more effort on the part of the players since they could not simply wait for the ball to bounce back to them. The variant proved popular and in 1864 the first four Squash courts were constructed at the school and Squash was officially founded as a sport in its own right.

Squash is played in around 185 countries, on approximately 50,000 courts, and the WSF now has approaching 150 Squash playing National Associations in membership. It is the sole International Federation for the sport, as recognised by the International Olympic Committee (IOC), and maintains responsibility for the Rules of the Game, Court and Equipment Specifications, Refereeing and Coaching. The WSF maintains a World Calendar of events, organises and promotes World Championships for Men, Women, Junior Men, Junior Women and Masters age groups in both singles and doubles Squash; and leads its Member Nations in programmes for the development of the sport.

During recent decades racket construction has moved from all wood to include other materials, the head size has increased and all glass courts have arrived enabling vastly improved spectator and broadcast options.

The Development of squash playing facilities

Until the 1960s the majority of squash playing facilities were 4-sided white plastered courts often with first floor rear balcony viewing.

Glass back walls became popular around the mid-1960s allowing increased spectator viewing behind.

4-sided glass show-courts are now common particularly for tournaments with spectator capacity around a single court now in the thousands.

These freestanding show-courts can be erected both inside and outside depending on climatic conditions.

Dramatic locations include the Pyramids in Cairo, Boston Symphony Hall, the Shanghai Bund, Hong Kong Harbour Grand Central terminus in New York along with many shopping malls and other sites



INTRODUCTION TO THE SQUASH COURT SPECIFICATION

1. *This Specification defines recommended standards for Singles and Doubles Squash courts for the International Game of Squash; referred to in North America as "Softball" Squash. It has been drawn up on behalf of the World Squash Federation (WSF) as the sole International Federation for Squash recognised by the International Olympic Committee (IOC).*
2. *The AIMS of the Specification are:*
 - *to ensure comparability of recommended size and quality standards for courts internationally*
 - *to guide manufacturers, builders and designers on suitable standards of squash court construction and design.*
3. *The Specification defines the basic characteristics of squash courts and courts built according to this Specification will be suitable for all types of play.*
4. *The WSF operates an Accreditation scheme for courts and equipment whereby materials and components are tested against the recommended standards set by the Federation. Applicable Accreditation standards relevant to court components are referenced in the document.*
5. *Manufacturers of court materials and components may apply for such Accreditation and gain approval for their product as "WSF Approved and Certified". A list of Accredited Products and Companies can be found on the WSF website.*
6. *Championships played under the auspices of the WSF, Regional Federations, the World Junior Circuit and a number of National Federations shall only be played on courts which meet the Specification in all respects and are constructed entirely from Accredited Products.*
7. *The Professional Squash Association (PSA) represents male and female professional squash players and in certain areas have their own specific court requirements which differ from the general standards set by the WSF. Where applicable the variations are referenced in the document but should be checked directly with the PSA.*
8. *The assistance of numerous manufacturers and National Federations in commenting on drafts and supplying information is acknowledged with grateful thanks, as is the work carried out by past and present Chairmen and members of the WSF Technical Committee.*
9. *The WSF reserves the right to amend the Specification at any time as it deems necessary.*

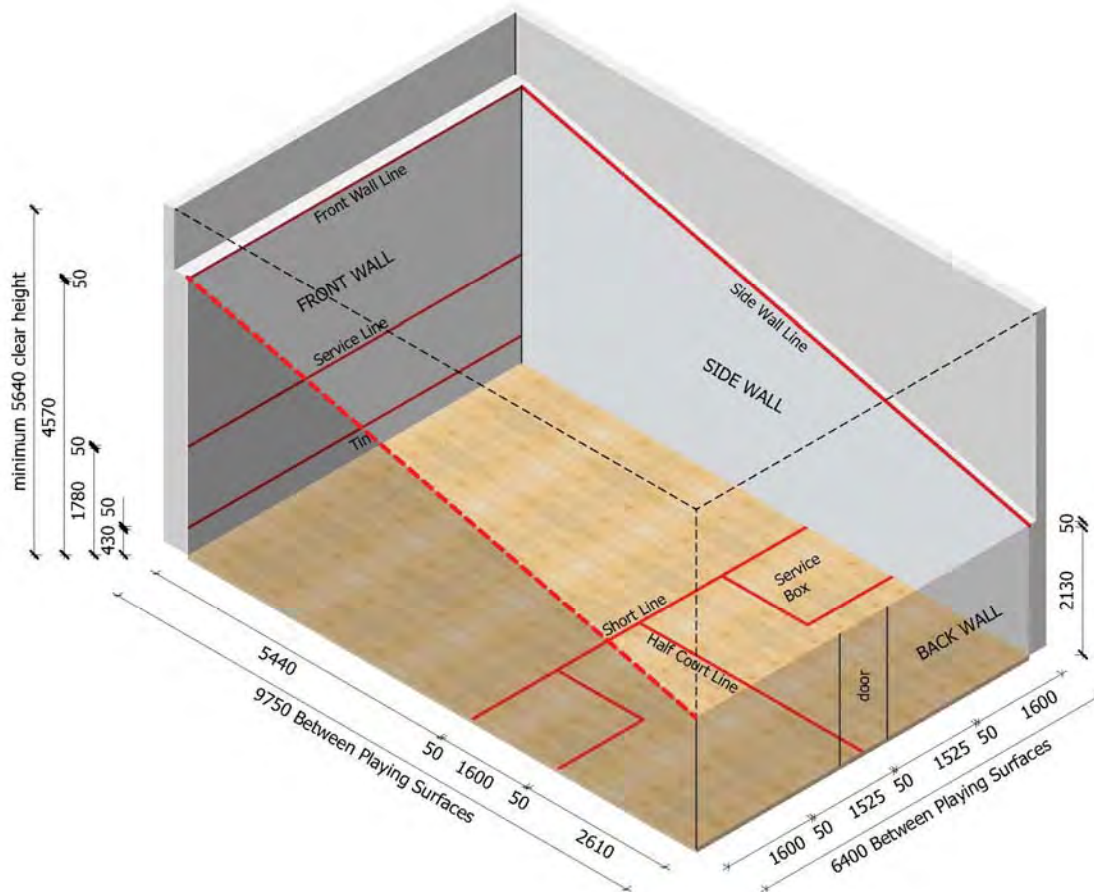
RULES

The Rules of the Game of Squash contain Appendices relating to:-

| | |
|--|-------------------|
| <i>The Dimensions of a Singles Squash Court</i> | <i>APPENDIX 1</i> |
| <i>The Dimensions of an International Doubles Squash Court</i> | <i>APPENDIX 2</i> |
| <i>The Dimensions of an International Competition width Doubles Squash Court</i> | <i>APPENDIX 3</i> |
| <i>The Description and Dimensions of a Hardball Doubles court</i> | <i>APPENDIX 4</i> |

GENERAL CONFIGURATION OF AN INTERNATIONAL SINGLES SQUASH COURT

Dimensions of an International Singles Squash Court



Critical dimensions

| | |
|-----------------|--------|
| Length of Court | 9750mm |
| Width of Court | 6400mm |
| Tin height | 480mm |

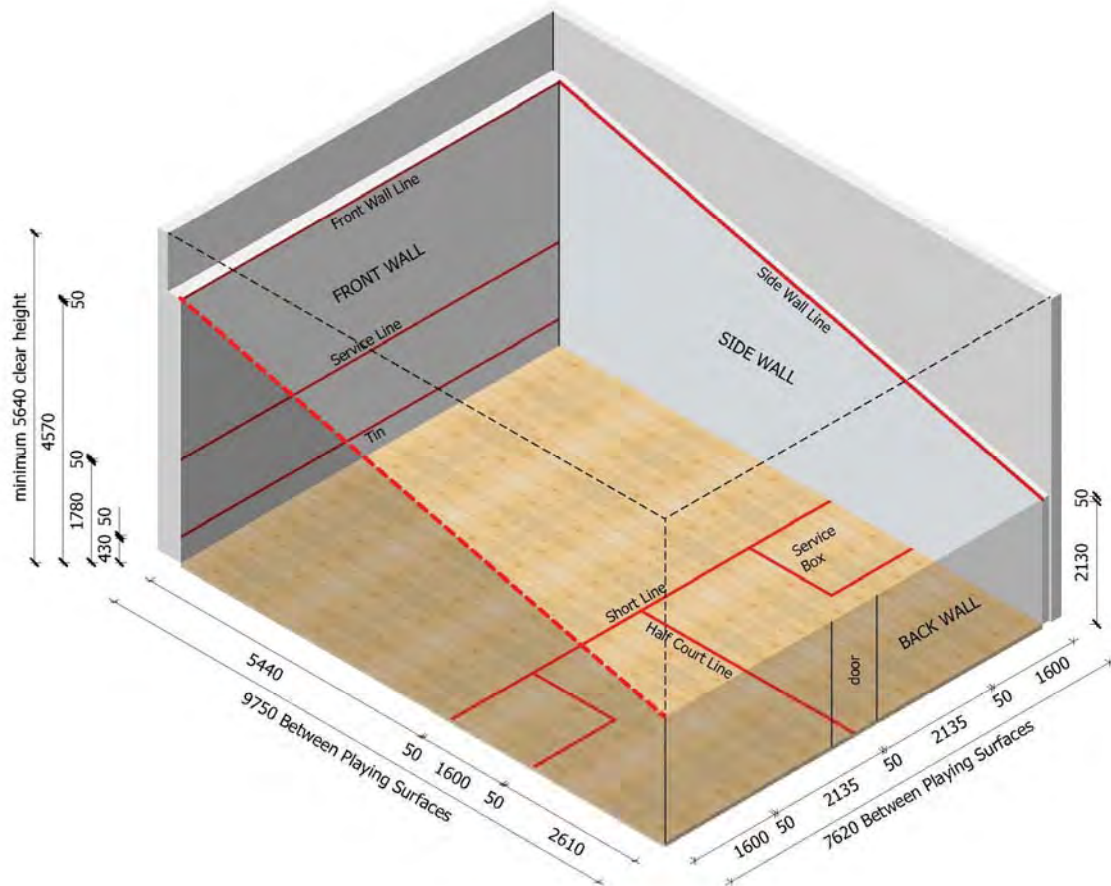
Notes

1. The above dimensions also apply to Squash 57 (formerly known as Racketball).
2. When designing a court layout it is important to note that the critical dimensions are to the internal finished wall playing surfaces and allowance must be made within the building structure for the thickness of plaster, the thickness of court panels or other wall lining materials.
3. A lowered tin height of 430mm is preferred for all PSA sanctioned tournaments. Tournaments with a tin height of 480mm may be sanctioned for some PSA Tournament levels.

Diagram 1
January 2017

GENERAL CONFIGURATION OF AN INTERNATIONAL DOUBLES SQUASH COURT

Dimensions of an International Doubles Squash Court



Critical dimensions

| | |
|-----------------|--------|
| Length of Court | 9750mm |
| Width of Court | 7620mm |
| Tin height | 480mm |

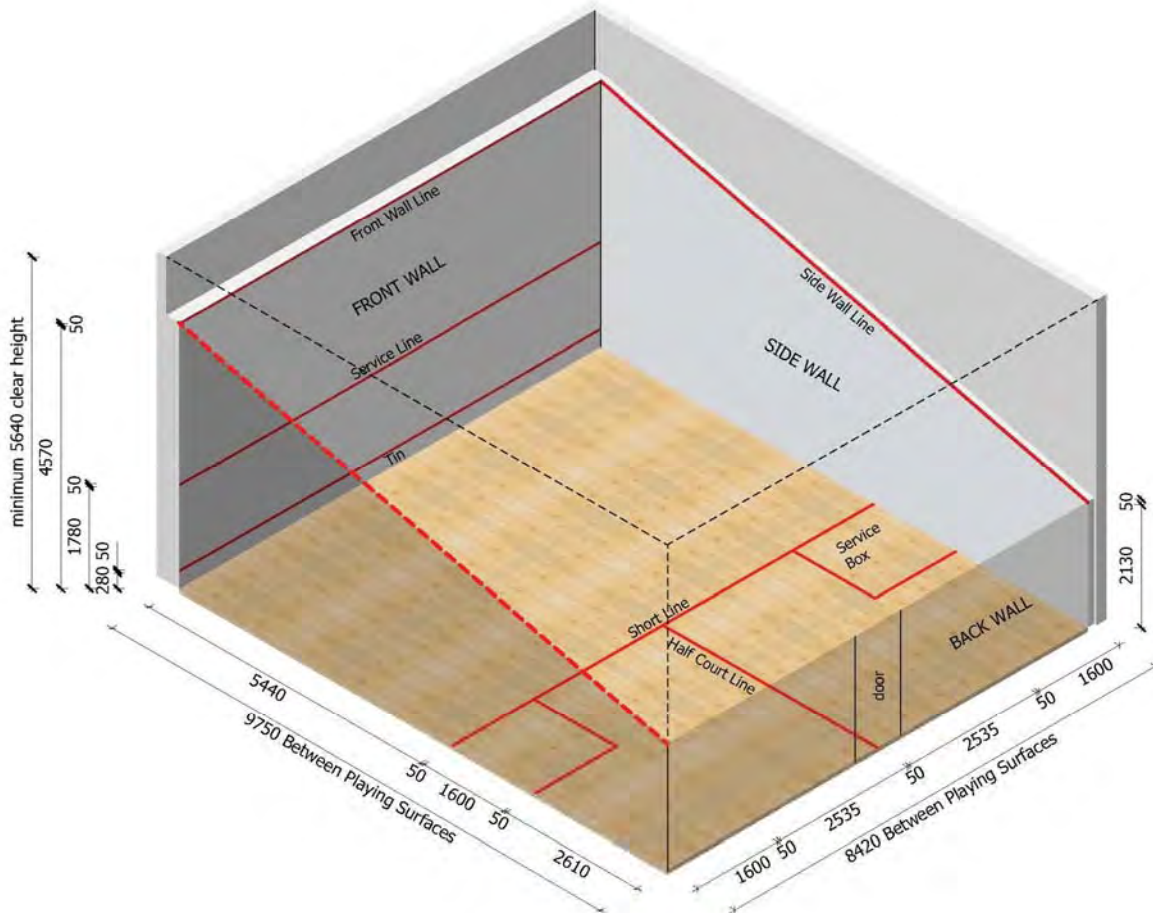
Notes

1. When designing a court layout it is important to note that the critical dimensions are to the internal finished wall playing surfaces and allowance must be made within the building structure for the thickness of plaster, the thickness of court panels or other wall lining materials.
2. A Doubles Squash Court is not suitable for singles play unless it has a moveable side wall which can be relocated to provide the singles court width of 6400mm.

Diagram 2
January 2017

GENERAL CONFIGURATION OF AN INTERNATIONAL COMPETITION WIDTH DOUBLES SQUASH COURT

Dimensions of an International Competition width (e.g. World Doubles, Pan-American & Commonwealth Games) Doubles Squash Court



Critical dimensions

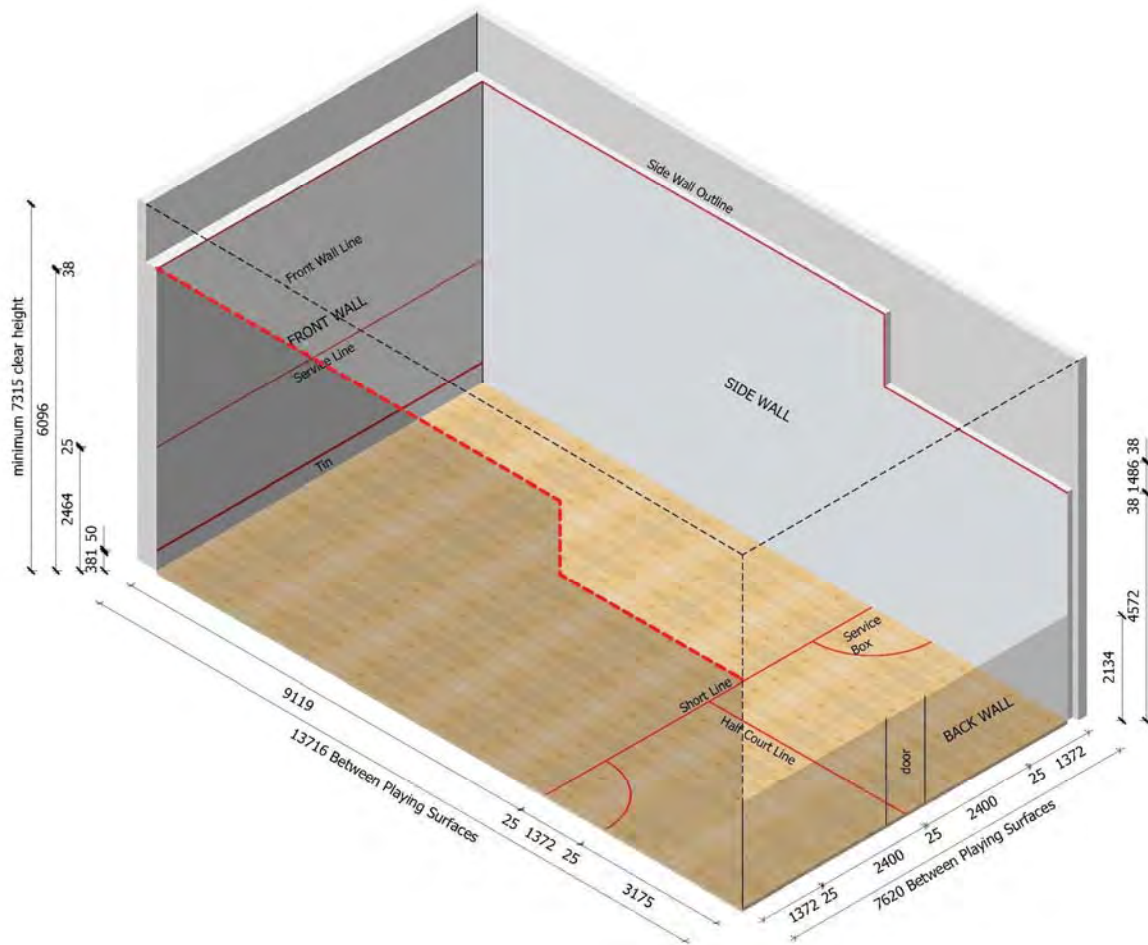
| | |
|-----------------|--------|
| Length of Court | 9750mm |
| Width of Court | 8420mm |
| Tin height | 330mm |

Notes

1. When designing a court layout it is important to note that the critical dimensions are to the internal finished wall playing surfaces and allowance must be made within the building structure for the thickness of plaster, the thickness of court panels or other wall lining materials.
2. An International Competition Doubles Squash Court is not suitable for singles play unless it has a moveable side wall which can be relocated to provide the singles court width of 6400mm.

Diagram 3
January 2017

GENERAL CONFIGURATION OF THE HARBALL DOUBLES COURT



Critical dimensions

Length of Court 13716mm (45'0")
 Width of Court 7620mm (25'0")
 Tin height 430mm (17")

Diagram 4
January 2017



RECOMMENDED STANDARDS OF CONSTRUCTION

1.00 MATCH OFFICIALS

- 1.01 *There shall be space provided for a marker and a referee, who shall be able to see the whole of the court and shall be able to hear the play and the players and be heard by them.*
- 1.02 *The space for the marker and the referee shall be behind the line of the back wall.*

2.00 SPECTATORS

- 2.01 *Spectator areas may be located behind the line of any wall of the court.*

3.00 CAMERA FACILITIES

- 3.01 *Play may be televised, filmed, photographed or recorded in any way from above the court or through any of the clear walls.*
- 3.02 *No camera or other equipment may project into any part of the court or below the minimum clear height above the court specified in clause 4.04 below.*
- 3.03 *Players inside the court should not be distracted by any camera or other equipment, or any persons operating the cameras or other equipment, behind either the front or the side walls during play.*
- 3.04 *Camera panels may be incorporated in any part of the court playing walls provided that any such panel shall be flush with the adjacent wall surfaces on the court side and match as closely as possible the colour of the adjacent surfaces on the court side and conform to 3.03*
- 3.05 *Camera panels shall have similar rebound characteristics to the surrounding court playing surface, be fixed in such a way as to withstand indefinitely the impact of the ball, rackets and players in normal play and be constructed of a material (for example safety glass) which will not be liable to cause serious injury to players or spectators if it breaks.*

4.00 COURT DIMENSIONS & TOLERANCES

- 4.01 *The finished plan dimensions of the International singles court, measured 1000mm above finished floor level, shall be:*
- Length: 9750mm plus or minus 10mm*
Width: 6400mm plus or minus 10mm
Diagonals: 11665mm plus or minus 20mm
- 4.02 *The finished plan dimensions of the International doubles court, measured 1000mm above finished floor level, shall be:*
- Length: 9750mm plus or minus 10mm*
Width: 7620mm plus or minus 10mm
Diagonals: 12375mm plus or minus 20mm
- 4.03 *The finished plan dimensions of the International Competition width doubles court measured 1000mm above finished floor level, shall be:*
- Length: 9750mm plus or minus 10mm*
Width: 8420mm plus or minus 10mm
Diagonals: 12883mm plus or minus 20mm

- 4.04 For all singles and doubles courts the clear height above finished floor level (i.e. the height to the underside of the lowest obstruction including lights, ventilation grilles etc.) shall be not less than 5640mm above the playing area except that the height may reduce gradually to 5000mm from a point 1000mm away from the front wall and reduce gradually to 4000mm from a point 3000mm away from the back wall as shown on diagram 5.

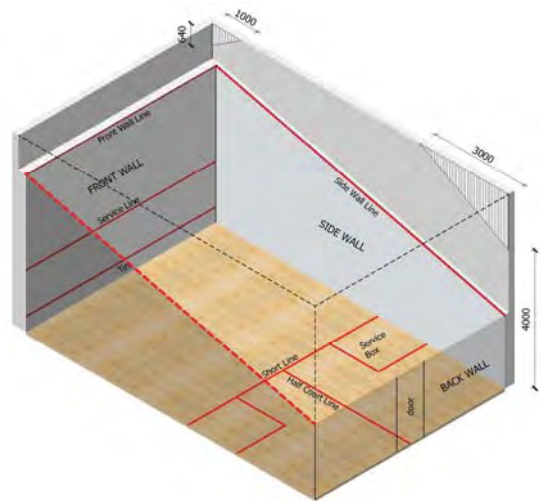


Diagram 5

Notes

1. When designing a court layout it is important to note that the above dimensions are to the internal finished wall playing surfaces and allowance must be made within the building structure for the thickness of plaster or other wall lining materials or panels.
2. For existing courts, it is recognised that on occasions where the wall playing surface has deteriorated beyond economic repair then the use of a wall renovation system might be considered. In these circumstances, it is recommended that the court plan dimensions are not reduced by more than 80mm from those noted above.

5.00 COURT MARKINGS

5.01 Generally

- 5.01.01 All court markings shall be 50mm wide and contrast in colour to adjoining surfaces, all wall markings shall be the same colour and all floor markings shall be the same colour.
- 5.01.02 All court markings shall be straight to within plus or minus 2mm in 3 metres and within +/- 5mm from the stated dimensions.
- 5.01.03 The maximum variation from the correct position of any court marking at any point shall not exceed 5mm, except that the Tin shall not be more than 2mm from the correct height at any point.
- 5.01.04 All vertical dimensions are from the finished floor surface to the underside of wall markings

5.02 Front Wall Markings

- 5.02.01 The front wall line - a horizontal line at a height of 4570mm to the underside indicating the height of the play area. Ideally the line should be shaped so as to deflect any ball striking it.
- 5.02.02 The service line - a horizontal line at a height of 1780mm to the underside indicating the lowest height of a service. The line shall be marked on the court surface and shall not deflect any ball striking it.

- 5.02.03 *The upper 50mm of the Tin – shall project into the court by not more than 15mm at the top and 45mm at the bottom and shall be shaped so as to deflect any ball striking it (see diagram 6) and all edges of the Tin shall be rounded. Below the upper 50mm, for the full width of the court, the **Tin shall be constructed in such a manner as to make a distinctive noise when struck by the ball.***

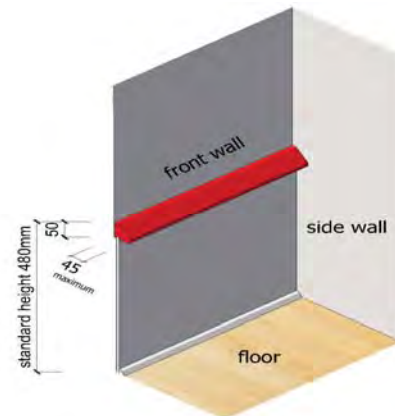


Diagram 6

- 5.02.04 *As an alternative to the upper 50mm of the Tin electronic devices may be used providing they emit an audible sound when the ball passes within the 50mm line zone that they replace and be unaffected by external conditions such as vibrations, atmospheric or illuminance variations.*

Notes

1. *The standard tin height is 480mm however a lowered tin height of 430mm is preferred for all PSA sanctioned tournaments. Tournaments with a tin height of 480mm may be sanctioned for some PSA tournament levels.*
2. *For courts where the holding of tournament events is a possibility the use of a tin that can be adjusted between 430mm and 480mm is recommended and if an International Competition width of 8420mm is being provided then the tin height should also be capable of being set at 330mm.*

5.03 Back Wall Markings

- 5.03.02 *the back wall line – a horizontal marking on the back wall at a height of 2130mm to the underside except that if the court has a transparent wall 2130mm high above finished floor level the back wall line shall be omitted.*
- 5.03.02 *if the court has a transparent back wall which is 2180mm or more high above finished wall level, the back wall line shall be marked on the inside (court) face of the wall.*
- 5.03.03 *if the court has a solid back wall, the back wall line shall ideally be so shaped as to deflect any ball striking it or shall be marked on the bottom edge of a sounding board not less than 200mm deep across the full width of the court. Any such sounding board may project up to 5mm into the court (see diagram 7).*

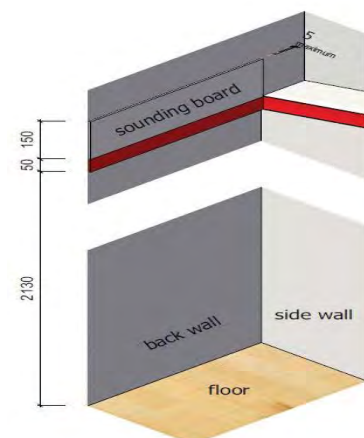


Diagram 7

5.04 Side Wall Markings

- 5.04.01 *The side wall line – a diagonal line joining the ends of the front wall line and the back wall line. If the back wall line is omitted as allowed above, the side wall line shall join the ends of the front wall and an imaginary back wall line. The side wall lines shall not project into the court but should ideally be so shaped as to deflect any balls striking them (see diagram 8).*

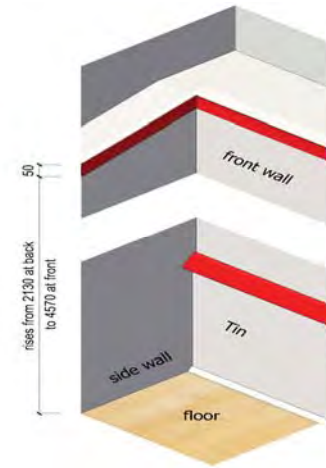


Diagram 8

5.05 Floor Markings

- 5.05.01 *the short line – shall be parallel to the front and back walls of the court. The distance to the nearest edge of the Short Line from the back wall shall be 4260mm. The Short Line shall be marked for the full width of the court.*
- 5.05.02 *the half court Line - shall be parallel to and equidistant from the side walls. It shall run from the back wall to the Short Line.*
- 5.05.03 *the service boxes - one on each side of the court behind the Short Line. Each service box shall be square with internal sides of 1600mm and shall be bounded on three sides by lines and bounded on the fourth side by one of the side walls.*
- 5.05.04 *court markings on the floor shall be flush with the finish and be anti-slip.*

6.00 COURT WALLS

6.01 Tolerances

- 6.01.01 *The court Walls shall be vertical to within plus or minus 5mm in a height of 2000mm when measured within 250mm of each corner of the court and at three additional intermediate points evenly spaced along the length of each wall.*
- 6.01.02 *The walls of the court shall be straight to within plus or minus 15mm in the length of any wall when measured horizontally at a height of 1000mm above finished floor level.*
- 6.01.03 *The walls of the court shall be plane and have no indentations, holes or open joints of more than 2mm across in any dimension in the plane of the wall*
- 6.01.04 *The walls of the court shall have no variations from the true surface of more than 3mm when measured in any direction with an 1800mm long straight edge.*

6.02 Construction

- 6.02.01 *Each wall of the court shall be of the same construction over the whole of the playing area except as allowed under 3.00 above. Adjacent walls need not be of the same construction.*
- 6.02.02 *Strength - The walls of the court and all components of them shall be capable of withstanding all the stresses which may be placed upon them in normal play and shall not suffer any permanent or temporary damage as a result of the impact of balls, rackets or players.*
- 6.02.03 **Impact** - *The impact of players is defined as equivalent to that of a human body with a mass of 100kg and a coefficient of absorption of 47% (i.e. 47% of the impact energy is absorbed by the body and 53% transmitted to the wall), travelling at the moment of impact at a speed of 4.5 metres per second and striking the wall at right angles to it over an area of not more than 0.25 square metres at a height to the centre of the impact area of 1.47 metres (plus or minus 50mm) over the whole of its length.*
- 6.02.04 **Deflection** – *The walls of the court shall not deflect under the impact of the ball in normal play to such an extent that the rebound of the ball is affected.*
- 6.02.05 *The walls may deflect due to the impact of players if it is necessary for their structural integrity however they should not deflect to such an extent or in such a manner so as to affect the safety of the players, officials or spectators.*
- 6.02.06 *Any wall which deflects as above wall shall return to its original static position within one second of the initial impact and shall not suffer any breakage nor any permanent or temporary damage as a result of the deflection.*

6.03 Finishes

- 6.03.01 *All playing walls of the court shall have a hard smooth finish.*
- 6.03.02 **Reflectance** - *the average reflectance of the front and side walls shall not be less than 50% at any point when in a clean condition.*
- 6.03.03 *The reflectance of the front and side walls shall not vary at any point by more than plus or minus 5% of the average reflectance.*
- 6.03.04 **Ball Rebound** – *The ball shall rebound truly on striking all parts of the playing walls. The ball rebound shall be consistent over the whole area of each wall, see Note 2 below for Accredited products.*
- 6.03.05 **Surface Friction** - *All wall surfaces including transparent materials shall have surface friction such that the pace and wall angle characteristics are similar to that encountered in a plaster court.*
- 6.03.06 **Joints in Playing Surfaces** - *Any joint in the finish of a wall or panel shall:*
- *not deflect the rebound of the ball in any way*
 - *not be wider than 2mm in the plane of the wall surface*
 - *be constructed in such a manner as to ensure that adjacent areas of the finish cannot move relative to one another at right angles to the plane of the wall following the impact of the ball, a racket or a player.*

Notes:

1. *The WSF Accreditation scheme requires that the wall surface be guaranteed for 5 years of normal competitive use and from January 2017 will carry out independent accelerated wear tests on all existing and potential accredited products.*
2. *The WSF Accreditation Scheme tests wall surfaces for consistency of rebound using a pendulum hammer device.*

6.04 Junctions

- 6.04.01 **Wall to Wall Junctions** - *There shall be no protrusions of any kind into the court at the junction of one wall with another.*
- 6.04.02 **Wall to Floor Junctions** - *There shall be no protrusion of any kind into the court at the junction of any wall of the court with the floor. An expansion joint may be provided at the junction of any wall of the court with the floor, but this shall not exceed 6mm in any dimension or at any point where the adjoining surfaces meet except that where, for technical reasons, the floor playing surface requires perimeter ventilation then the joint shall not exceed 12mm.*

6.05 Moveable Walls

- 6.05.01 *Where courts are provided with moveable walls these walls shall comply in all respects with the general requirements of the Court Specification as if they are of a permanent construction.*
- 6.05.02 *It is recognised that moveable walls require construction tolerances to ensure safe and effective operation, movement joints may be provided as follows:*
- *a horizontal movement joint between the moveable wall and the floor no greater than 12mm when the wall is in the fixed position*
 - *a vertical movement joint between the moveable wall and the adjoining side and back walls no greater than 15mm when the wall is in the fixed position.*

6.06 Transparent Walls

- 6.06.01 *Where courts have transparent walls they shall be constructed of safety materials tested in accordance with the appropriate national standard to a test energy equivalent to that defined in 6.02.03 above and shall meet the stated requirements for safe breakage.*
- 6.06.02 *In the absence of an appropriate National Standard the requirements of BS EN 12600:2000 and North American ANSI Z97.1 1984 are among those considered acceptable.*
- 6.06.03 *Transparent walls shall comply with all other aspects of clause 6.00 including construction, surface friction and general playing characteristics.*
- 6.06.04 *Any front or side walls, or any transparent panel in the playing surface of the front or side walls, shall be treated and/or lit in such a manner as to make it non-reflecting when viewed from inside the court.*
- 6.06.05 *It is important that when glass or other transparent materials are used for side walls or front walls of a squash court then the surface is treated in such a way as to enhance both player ball visibility and spectator viewing by providing a form of 'one way vision'.*

Note

Clause 6.06.05 is mandatory for Accredited glass or other transparent side and front walls.

7.00 THE DOOR

7.01 Position of the Door

It is recommended that the door to the court is located in the middle of the back wall, but in any event should be in the middle third area of the court and shall open into the court.

7.02 Inside Surface of the Door

The inside surface of the door shall be plain and shall be flush with the adjacent wall surfaces when the door is closed. It shall be fitted with a flush handle and a restraining device which shall stop the door opening through 180 degrees and hitting the court wall.

The door shall match the colour, texture and ball rebound characteristics of the adjacent wall surfaces as closely as possible and shall be fitted with a latch or other mechanism which will prevent the door opening following an impact of a player with it on the court side.

7.03 Size of the Door

The door shall be between 750mm and 900mm wide by 2130mm high except when disabled access is required in which case it may be increased to 1000mm subject to technical appraisal by the manufacturer and compliance with clause 6.02 when transparent materials are being used.

7.04 Finger Traps with Transparent Doors

The amount by which the edge of any transparent door, or adjacent transparent panel, deflects relative to any part of the frame or edge of any adjacent panel following an impact as specified in Clause 6.02.03 shall not exceed:-

- *the thickness of the transparent panel plus 2mm at an impact velocity of 3 metres per second*
- *the thickness of the transparent panel plus 12mm at an impact velocity of 4.5 metres per second.*

Note

The WSF Accreditation Scheme requires that all transparent doors are fitted with 3 point restraints on both sides.

8.00 THE FLOOR

8.01 Surface Finish

The floor shall be hard, smooth, have limited spring and provide a firm footing in normal play.

8.02 *The floor shall either be:-*

- *able to absorb small amounts of moisture without becoming slippery or*
- *if provided with an impervious surface be tested in accordance with Appropriate National Standards to demonstrate adequate slip resistance.*

8.03 *In the absence of any National Standards the requirements of the BS EN 14904:2006 is considered acceptable.*

8.04 *The floor shall be kept clean of all rubber, dust particles and other depositions which may reduce its slip resistance.*

8.05 *When viewed from vertically above the line of flight of the ball, the linear path of the ball shall not be affected when it bounces on the floor.*

8.06 Colour & Reflectance

- *The floor shall have a matt finish.*
- *The floor shall have a natural wood finish or be otherwise coloured as below with a minimum reflectance value of 50% + or - 10%.*

Notes

1. *Whilst it is not uncommon to leave a court floor unsealed this does make the surface susceptible to staining from dirt, blood injuries and other deposits as well as making the surface more difficult to clean. A number of manufacturers pre-treat their floor products in factory controlled conditions which provides protection to the playing surface but still ensures the floor surface maintains its slip resistance.*
2. *The Professional Squash Association (PSA) issue guidelines for Court preparation in connection with Tournament play which includes a section on establishing the suitability of the court floor as regards slip resistance.*
3. *For Tournament play it is common to use a white ball so that it contrasts with the wall playing surface and is more visible for media transmission. In these circumstances it is also necessary to have a darker coloured floor surface with a suggested reflectance value no higher than 25%.*

9.00 THE CEILING & OUT OF COURT AREAS

9.01 Shape of the Ceiling

- 9.01.01 *The ceiling shall be a simple shape against which the players shall be able to sight the ball without difficulty.*
- 9.01.02 *The clear height above the court to the underside of the ceiling shall be 5640mm above however may be reduced to the area above the front and rear of the court as clause 4.04 above and diagram 5.*

9.02 Ceiling Finish

The ceiling shall have a plain matt finish and shall be a light colour against which the players shall be able to sight the ball without difficulty. The minimum reflectance value shall be 80% as below and for the purposes of this paragraph the ceiling shall include all areas in view from the court against which players may have to sight the ball.

Note

Where 4-sided glass courts are used in a stadium setting the ceiling is usually part of the building enclosure rather than part of the court. In these circumstances Clause 9.02 as regards reflectance values will not apply.

9.03 Roof Lights

There shall be no windows or other areas of glazing over any part of the court. If windows are provided in any walls above or adjoining the court they shall be provided with blinds.

9.04 Out of Court Wall Areas

The walls of the court may be extended upwards as required but shall not project into the space above the court. Any wall so extended upwards shall have a plain matt finish and shall be white or a light colour against which the players shall be able to sight the ball without difficulty with a minimum reflectance value of 50% as below.

10.00 THE USE OF COLOUR & DESIGNS

- 10.01 *There shall be no more than three different colours on the wall playing surfaces within the court.*
- 10.02 *Each of the side walls shall be of one colour and each side wall shall be the same colour.*
- 10.03 *The front wall may be two colours, one below and one above the service line. The front wall colours need not be the same colour as the side wall colours.*
- 10.04 *The floor shall have no more than two colours and each colour shall be bounded on at least two sides by the floor markings. The use of colours shall be symmetrical about the half court line. Natural wood materials shall be considered to be of one colour providing the whole complies with clause 10.05.*
- 10.05 *All colours shall have a minimum reflectance value of 50% and all colours shall be of the same reflectance value + or - 10%.*
- 10.06 *Colours will be permitted on all new and existing courts providing that the average illumination does not fall below the recommended standard of 500 lux or the minimum standard of 300 lux.*
- 10.07 *Out of court wall surfaces shall have a reflectance value the same or higher than any of the colours used on the play wall surfaces.*
- 10.08 *The ceiling shall have a minimum reflectance value of 80%.*
- 10.09 *Stripes or patterns of any type will not be permitted on the wall playing surfaces except on the back wall up to a height of 750mm and on the front wall at a minimum height of 3600mm above the floor where a logo, club or sponsors name may be used providing it is not more than 750mm square and is located central on the front wall.*
- 10.10 *A logo, club or sponsors name on the floor will not normally be permitted however individual designs may be specifically approved by the WSF upon request.*
- 10.11 *The minimum reflectance value of any of the colours used in any logo or name shall be 30%.*
- 10.12 *The Tin, below the top 50mm, may be of any colour and contain advertising, logos, club or sponsors names providing no part has a reflectance value of less than 30%.*
- 10.13 *The court play lines may be any colour providing they contrast with all colours used on adjoining play surfaces. Wall play lines need not be the same colour as floor play lines.*
- 10.14 *Patterns and coaching aids on either the floor or the walls will not normally be permitted however individual designs may be specifically approved by the WSF upon request and following play testing to determine ball visibility.*
- 10.15 *All lines colours or other markings on the floor shall be anti-slip in accordance with the Squash Court Specification.*
- 10.16 *For an illustrative version of the above see Appendix 4.*

11.00 LIGHTING

11.01 Court Lighting Installation

The court shall be lit by artificial light. The level of illumination measured 1000mm above the finished floor shall be:-

11.01.01 Minimum standard 300 lux

11.01.02 Recommended standard 500 lux

11.01.03 Recommended standard for LED installation 600 lux

11.02 The walls of the court shall be lit in such a way as to appear evenly and uniformly illuminated and the lux levels shall not vary at any point by more than 15% from the average level of illumination.

11.03 The lighting shall be shadow-free and free from any visible stroboscopic effects.

11.04 In courts with transparent walls, the level of illumination outside of the court will need to be adjusted to suit specific site conditions. In normal circumstances a glass back wall needs lighting levels to be the same both side of the glass whereas in 4-sided courts the lighting level inside the court needs to be higher than immediately outside the court. A difference of approximately 30% is considered to be a normal installation.

11.05 The use of LED Lamps & Fittings

11.05.01 LED lamps provide a significant increase in light output per fitting and are considerably cheaper to run than other lamps. Since the recommended standard of 500 lux can be achieved with fewer fittings the variation in the level of illumination is likely to be greater than permitted by clause 11.02.

11.05.02 It is therefore recommended that a minimum of 6 LED fittings be provided in a singles court and 8 in a doubles court so as to provide an even distribution of light

11.05.03 It is recommended that the LED lamps be in the colour temperature range of 3,500 degree K or above commonly referenced as 'cool white'.

11.06 Lighting for TV Transmission.

There are no set standards for the lighting levels required for TV transmission however 1200 lux should be considered a minimum and advice sought from proposed TV providers on an individual basis when transmission is anticipated.

Note

The majority of tournament play attracting TV transmission will involve the participation of professional players. Advice should therefore also be sought from the Professional Squash Association (the PSA)

12.00 HEATING & VENTILATION

12.01 Temperature

12.01.01 It is recommended that a Squash court and any adjacent spectator areas including the space for the marker and referee) shall be provided with a heating and/or air conditioning system which is capable of maintaining a temperature of between 15 and 25 degrees Celsius with an ideal range of 18 to 20 degrees Celsius.

12.01.02 *Local variations in external temperature and humidity may result in temperatures outside of the above ranges being acceptable to players.*

12.02 Ventilation System

12.02.01 *The court and any adjacent spectator areas (including the space for the marker and referee) shall be provided with a ventilation system which shall provide not less than four complete air changes per hour when the court is in use.*

12.03 Condensation

12.03.01 *The court walls and floor shall be constructed, insulated, heated and/or ventilated in such a way as to ensure that they remain free of condensation when the court and any adjacent spectator area is in use.*

12.04 Location of Grilles & Other Equipment

12.04.01 *The only part of the court which may be used as a location for any heating or ventilation equipment shall be below the top 50mm of the Tin on the front wall, provided that the sounding characteristics are maintained and that there are no projections into the court.*

12.04.02 *No part of any heating or ventilating or other equipment may project into the clear space above the court required by clause 4.04 of this Specification, excepting that equipment may be mounted on the front wall above the playing surface provided that:*

- *no part of any such equipment is less than 5000mm above the floor level in the court nor projects into the court outside of the triangle formed by the reduced height above the front wall*
- *no part of any such equipment projects more than 150mm into the clear space above the court*
- *no shadows are thrown onto the front wall*

APPENDIX 1

DESCRIPTION & DIMENSIONS OF AN INTERNATIONAL SINGLES SQUASH COURT

DESCRIPTION

A Squash Court is a rectangular box with four vertical walls of varying height; being the Front Wall, Side Walls and Back Wall. It has a level floor and a clear height above the court area.

DIMENSIONS

| | |
|---|------------------------|
| <i>Length of court between playing surfaces</i> | <i>9750mm</i> |
| <i>Width of court between playing surfaces</i> | <i>6400mm</i> |
| <i>Diagonal</i> | <i>11665mm</i> |
| <i>Height above floor to lower edge of Front Wall Line</i> | <i>4570mm</i> |
| <i>Height above floor to lower edge of Back Wall Line</i> | <i>2130mm</i> |
| <i>Height above floor to lower edge of Service Line on Front Wall</i> | <i>1780mm</i> |
| <i>Height above floor to the top of the Tin</i> | <i>480mm</i> |
| <i>Distance to nearest edge of Short Line from Back Wall</i> | <i>4260mm</i> |
| <i>Internal dimensions of Service Boxes</i> | <i>1600mm</i> |
| <i>Width of all lines and the upper section of the Tin.....</i> | <i>50mm</i> |
| <i>Minimum clear height above the floor of the court</i> | <i>5640mm (Note 8)</i> |

NOTES

- 1. The Side Wall line is angled between the Front Wall Line and the Back Wall Line.*
- 2. The Service Box is a square formed by the Short Line, the Side Wall and two other lines marked on the floor.*
- 3. The length, width and diagonal of the court are measured at a height of 1000mm above the floor.*
- 4. It is recommended that the Front Wall Line, Side Wall Line, Back Wall Line and upper 50mm of the Tin are shaped so as to deflect any ball that strikes them.*
- 5. No part of the upper section of the Tin shall project from the Front Wall by more than 45mm.*
- 6. It is recommended that the door to the court is in the centre of the Back Wall.*
- 7. The general configuration of a Squash Court, its dimensions and its markings are illustrated on the diagram.*
- 8. The clear height may reduce gradually to 5000mm from a point 1000mm away from the front wall and reduce gradually to 4000mm from a point 3000mm away from the back wall as shown on Diagram 5.*

CONSTRUCTION

A Squash Court may be constructed from a number of materials providing they have suitable ball rebound characteristics and are safe for play; however, the WSF publishes a Squash Court Specification which contains recommended standards. The standards must be met for competitive play as required by the appropriate National Governing Body of Squash.

CONSTRUCTION NOTE

Court constructors are advised that where events involve professional players the height above floor to the top of the Tin may be reduced from 480mm to 430mm. If you are considering holding a professional tournament please check with the PSA and the WSF office for the latest guidelines.

APPENDIX 2

DESCRIPTION & DIMENSIONS OF AN INTERNATIONAL DOUBLES SQUASH COURT

DESCRIPTION

A Squash Court is a rectangular box with four vertical walls of varying height; being the Front Wall, Side Walls and Back Wall. It has a level floor and a clear height above the court area.

DIMENSIONS

| | |
|---|----------------------------------|
| <i>Length of court between playing surfaces</i> | <i>9750mm</i> |
| <i>Width of court between playing surfaces</i> | <i>7620mm or 8420mm (Note 8)</i> |
| <i>Diagonal</i> | <i>12375mm</i> |
| <i>Height above floor to lower edge of Front Wall Line</i> | <i>4570mm</i> |
| <i>Height above floor to lower edge of Back Wall Line</i> | <i>2130mm</i> |
| <i>Height above floor to lower edge of Service Line on Front Wall</i> | <i>1780mm</i> |
| <i>Height above floor to the top of the Tin</i> | <i>480mm or 330mm (Note 8)</i> |
| <i>Distance to nearest edge of Short Line from Back Wall</i> | <i>4260mm</i> |
| <i>Internal dimensions of Service Boxes</i> | <i>1600mm</i> |
| <i>Width of all lines and the upper section of the Tin.....</i> | <i>50mm</i> |
| <i>Minimum clear height above the floor of the court</i> | <i>5640mm (Note 9)</i> |

NOTES

- 1. The Side Wall is angled between the Front Wall Line and the Back Wall Line.*
- 2. The Service Box is a square formed by the Short Line, the Side Wall and two other lines marked on the floor.*
- 3. The length, width and diagonal of the court are measured at a height of 1000mm above the floor.*
- 4. It is recommended that the Front Wall Line, Side Wall Line, Back Wall Line and upper 50mm of the Tin are shaped so as to deflect any ball that strikes them.*
- 5. No part of the upper section of the Tin shall project from the Front Wall by more than 45mm.*
- 6. It is recommended that the door to the court is in the centre of the Back Wall.*
- 7. The general configuration of a Squash Court, its dimensions and its markings are illustrated on the diagram.*
- 8. **International Competition Width:** For WSF recognised World and Regional events and Commonwealth Games, the width of the court between playing surfaces has been expanded from 7620mm to 8420mm and the height above the floor to the top of the tin shall be 330mm.*
- 9. The clear height may reduce gradually to 5000mm from a point 1000mm away from the front wall and reduce gradually to 4000mm from a point 3000mm away from the back wall as shown on Diagram 5.*

CONSTRUCTION

A Squash Court may be constructed from a number of materials providing they have suitable ball rebound characteristics and are safe for play; however, the WSF publishes a Squash Court Specification which contains recommended standards. The standards must be met for competitive play as required by the appropriate National Governing Body of Squash.

APPENDIX 3

DESCRIPTION & DIMENSIONS OF A HARDBALL DOUBLES COURT

DESCRIPTION

A Squash Court is a rectangular box with four vertical walls of varying height; being the Front Wall, Side Walls and Back Wall. It has a level floor and a clear height above the court area.

DIMENSIONS

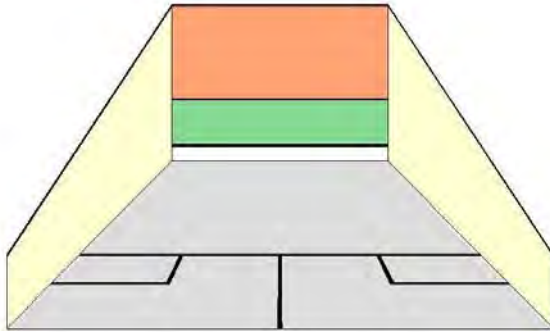
| | |
|---|---------------------------|
| <i>Length of court between playing surfaces</i> | <i>13716mm (45' 0")</i> |
| <i>Width of court between playing surfaces</i> | <i>7620mm (25' 0")</i> |
| <i>Diagonal</i> | <i>15691mm (51' 5 ¾")</i> |
| <i>Height above floor to lower edge of Front Wall Outline</i> | <i>6096mm (20' 0")</i> |
| <i>Height above floor to top of Back Wall</i> | <i>2134mm (7' 0")</i> |
| <i>Height above floor to upper edge of Service Line on Front Wall</i> | <i>2464mm (8' 2")</i> |
| <i>Height above floor to upper edge of Tin</i> | <i>432mm (17")</i> |
| <i>Distance to nearest edge of Short Line from Back Wall</i> | <i>4572mm (15'0")</i> |
| <i>Internal dimensions of quadrant Service Boxes</i> | <i>1372mm (4' 6")</i> |
| <i>Width of all outlines</i> | <i>38mm (1 ½")</i> |
| <i>Width of all other lines</i> | <i>25mm (1")</i> |
| <i>Minimum clear height above the floor of the court</i> | <i>7315mm (24'0")</i> |

NOTES

- 1. The Side Wall play area steps down from a height of 6096mm (20' 0") to a height of 4572mm (15' 0") at a distance of 4267mm (14' 0") from the back wall, 38mm (1 ½") outlines are positioned outside of the play area.*
- 2. The Service Box is a quadrant marked on the floor with an internal radius of 1372mm (4'6").*
- 3. The length, width and diagonal of the court are measured at a height of 1000mm (3'4") above the floor.*
- 4. The top of the Tin should be bevelled 50mm (2") wide and sloped to meet the vertical portion 381mm (15") above the floor.*
- 5. It is recommended that the door to the court is in the centre of the Back Wall.*
- 6. The general configuration of a Hardball Doubles Squash Court is illustrated on the diagram.*

APPENDIX 4

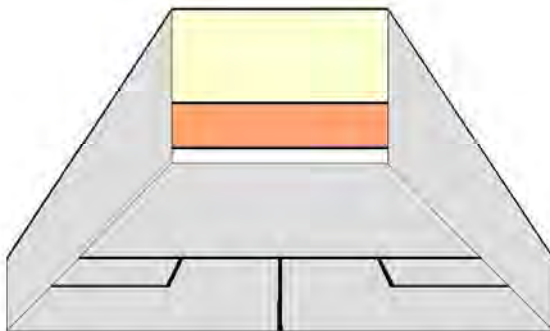
THE USE OF COLOUR & DESIGN



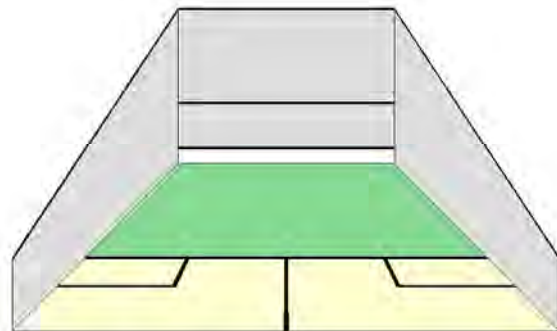
1. There shall be no more than three different colours on the wall playing surfaces within the court.



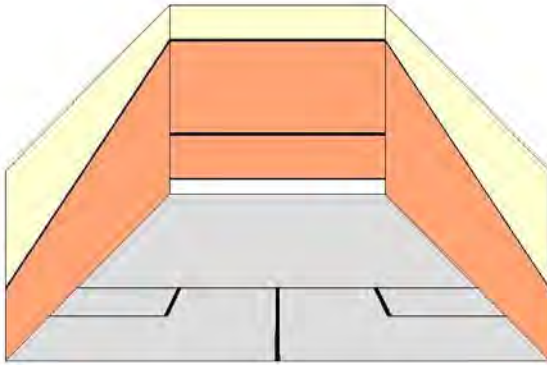
2. Each of the side walls shall be one colour and each side wall shall be the same colour.



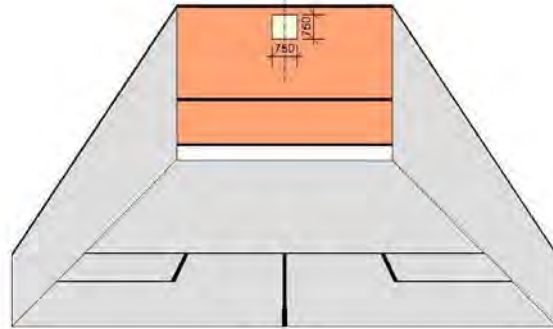
3. The front wall may be two colours, one below and one above the service line. The front wall colours need not be the same colour as the side wall colours.



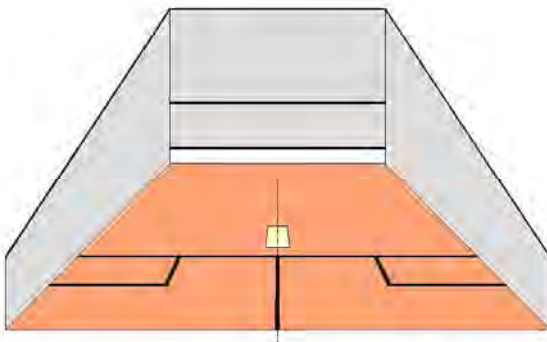
4. The floor shall have no more than two colours and each colour shall be bounded on at least two sides by the floor markings. The use of colours shall be symmetrical about the half court line. Natural wood materials shall be considered to be one colour providing the whole complies with clause 10.5.



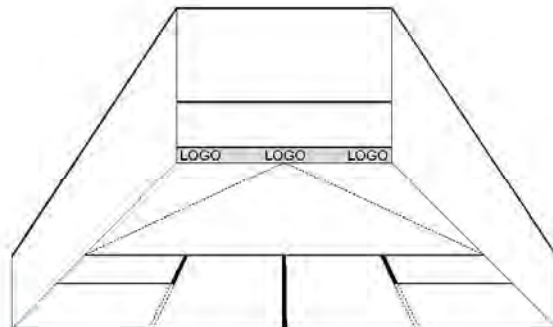
5. All colours shall have a minimum reflectance value of 50% and all colours shall be of the same reflectance value + or - 10%.
6. Colours will be permitted on all new and existing courts providing that the average illumination does not fall below the recommended standard of 500 lux or the minimum standard of 300 lux.
7. Out of court wall surfaces shall have a reflectance value the same or higher than any of the colours used on the play wall surfaces.
8. The ceiling shall have a minimum reflectance value of 80%



9. Stripes or patterns of any type will not be permitted on the wall playing surfaces except on the front wall at a minimum height of 3600mm above the floor where a logo, club or sponsors name may be used providing it is not more than 750mm square and located central on the front wall.
11. The minimum reflectance value of any of the colours used in any logo or name shall be 30%.



10. A logo, club or sponsors name on the floor will not normally be permitted however individual designs may be specifically approved by the WSF upon request.
11. The minimum reflectance value of any of the colours used in any logo or name shall be 30%.



12. The tin may be of any colour and contain advertising, logos, club or sponsors names providing no part has a reflectance value of less than 30%.
13. The court play lines may be any colour providing they contrast with all colours on adjoining play surfaces. Wall play lines need not be the same colour as floor play lines.
14. Patterns and coaching aids on either the floor or the walls will not normally be permitted however individual designs may be specifically approved by the WSF upon request and following play testing to determine ball visibility.
15. All lines, colours or other markings on the floor shall be non slip in accordance with the Squash Court Specification.

THE WORLD SQUASH FEDERATION SQUASH COURT ACCREDITATION & REGISTRATION

1. ACCREDITATION

(a) WHAT IS WSF ACCREDITATION?

The World Squash Federation (WSF) is the world governing body for the sport of Squash, recognised by the IOC. The Federation sets the rules of the game, which contain specifications for courts, rackets, balls and clothing.

The Federation also sets Accreditation standards for the components and materials used in the construction of Squash courts, notably plaster, panel systems, glass walls, doors, floors and lighting.

(b) WHY ACCREDITATION?

For manufacturers: *Accreditation of court components and materials enables the manufacturer to give customers an assurance of quality and standard which comes from an independent authority, known and respected throughout the world. It reassures the architect or specifier of courts that the components and materials meet his requirements.*

Products bearing the WSF Accreditation mark have an immediate advantage over their competitors. Non-Accredited products may be perfectly good quality and meet the specification, but can they easily prove it?

For constructors: *All those involved commercially in selling Squash components and materials need to be assured that the product they are handling meets the specifications and standards set for the sport. They may not be experts in the rules and regulations covering the products but can rely on the fact that the appropriate world authority has endorsed them as meeting the required specifications and standards.*

For the sport: *The Accreditation scheme is a means by which the WSF exercises control over the development of court components and materials to ensure that the needs of the sport are served in the best possible way. As a non-profit making body the sole concern of the WSF is the wellbeing and development of Squash, and its Accreditation ensures that undesirable or unsafe products can be identified by all those within the sport.*

The WSF actively encourages all its Members Associations to support those products which are WSF Accredited (courts) and/or Approved (balls).

(c) WSF ACCREDITED PRODUCTS

Manufacturers of Squash court components and materials may apply to the WSF to have their products inspected and, if they meet certain criteria, confirmed as WSF Accredited Products. All such products may then carry the WSF Accreditation logo on their promotional materials, and be used in product promotion.

(d) ACCREDITATION CRITERIA

The WSF carries out inspection and in-use assessment or arranges testing to ensure that products meet the set specifications and technical standards. Where testing is required the WSF will advise on the appropriate measures and the manufacturer is then responsible for providing the necessary evidence of performance or quality.

To have products endorsed as "WSF Accredited" manufacturers of court components and materials must:

- i. Demonstrate that the products meet the appropriate WSF specification for:*
 - Fitness for purpose*
 - Safety in use*
 - Durability*

- ii. *Provide evidence that they have been installed for a minimum period, to be advised by the WSF on application.*
- iii. *Maintain and produce to the WSF a list of all installations to allow for regular inspection.*
- iv. *Provide a guarantee to their customers of not less than 12 months from installation.*
- v. *Produce evidence that they carry appropriate product liability insurance and be prepared for the interest of the WSF to be noted on the policy.*
- vi. *Maintain an appropriate after-sales service.*
- vii. *Advise the WSF of any changes to the products as they occur.*

Court components are classified as wall surfacing materials, wall systems, glass walls, floors and others. No single application may comprise more than one category of product unless it is for an indivisible combination of components.

The WSF reserves the right to Accredite or not Accredite products at its sole discretion.

(e) GRANTING ACCREDITATION

On application to the WSF, manufacturers will be given full details of the procedure necessary to obtain Accreditation. This is likely to involve undertakings to:

- i. *Arrange for the testing of the products at nil cost to the WSF, usually through an independent testing authority or by a specialist recommended by the WSF.*
- ii. *Pay for the pre-agreed costs of an inspection by a member of the WSF Technical Committee.*
- iii. *Not use the results of any such testing or offers of Accreditation without payment of the appropriate fees.*

After inspection the WSF will then make a formal offer of Accreditation, which will be granted on an annual basis on payment of the appropriate fee. Details of the current fees can be obtained from the WSF office.

(f) WSF ACCREDITED COMPANIES

Any company that can demonstrate relevant experience and expertise in providing squash courts - using only WSF Accredited Products - is eligible to apply to become a WSF Accredited Company.

WSF Accredited Companies will be required to undertake to abide by terms including the following:

- i. *Provide a five-year guarantee that covers both materials and workmanship.*
- ii. *Undertake to notify the WSF of any changes to the composition or specifications of an Accredited Product; paying for re-inspection where necessary when this occurs.*
- iii. *Ensure that they have and maintain the capability to provide complete courts using only Accredited Products.*
- iv. *Undertake to notify the WSF of all courts that they have built, together with confirmation of the Accredited Products and non-accredited products used.*
- v. *If courts are constructed using only Accredited Products then they will be considered compliant and the Accredited Company will be given the right to register that court for competition play, subject to the payment of the relevant registration fee.*
- vi. *Accredited Companies are encouraged to use only Accredited Products, though this is not compulsory unless Court Registration is required.*

(g) COURT REGISTRATION

WSF Court Registration is offered where the essential components of the complete court i.e. four walls, floor, tin and lighting, are separately or collectively Accredited.

Courts built by a WSF Accredited Company may be Registered by the company or the court owners at any time before, during or after the building process, subject to the payment of the Registration fees. Courts using WSF Accredited Products but not built by an Accredited Company can be Registered subject to inspection. Registration is optional.

Only WSF Registered courts may be used for hosting WSF World, Regional, World Junior Circuit and other recognised events and these courts will be published in the WSF Worldwide Registered Court Directory.

(This specification is not applicable for courts in existence before 2013, where normal adherence to WSF specifications will apply).

2. BENEFITS OF ACCREDITATION

After Accreditation all products, packaging, promotional materials and advertising may carry the WSF Accreditation logo, which will be provided by the WSF.

A full list of WSF Accredited companies and their products is maintained and distributed regularly to WSF Member Nations and also sent out in response to enquiries by architects and planners.

The WSF will forward all enquiries received regarding suitable products for constructing squash courts to all relevant Accredited companies.

All Accredited companies and their products are listed on the WSF website (www.worldsquash.org).

3. APPLICATIONS & INFORMATION:

World Squash Federation

25 Russell Street, Hastings, United Kingdom, TN34 1QU

Tel: (44) 1424 447440 Fax: (44) 1424 430737 E-mail: wsf@worldsquash.org