

**GUIDELINES & PROCEDURES FOR MANUFACTURERS
TO CERTIFY THAT EQUIPMENT COMPLIES WITH
PDGA TECHNICAL STANDARDS**

Rev. 1/2//08 (minor typo correction from 12/15/07b version)

(I) DISCS

(A) Submission Procedure

In order to have the production of a mold approved for certification, the equipment manufacturer must submit at least three samples of the disc to the PDGA Technical Standards Committee Chair. Developers are encouraged to make early communication with the chair of the committee well prior to submission of samples if they have any questions about the ramifications of a potential design.

For mailing, contact and payment details, see section (IV) below.

The PDGA Technical Standards Committee is responsible for testing equipment submitted for PDGA approval. The tests are conducted either by an independent laboratory or by a committee member with the expertise and equipment necessary to measure the physical attributes.

After evaluation of the submission, the Technical Standards Committee will prepare a report of the specifications and suitability of the disc for play. That report is forwarded to the Board of Directors for its review and certification, which is typically done on a monthly basis. In most cases, the approval process by the Technical Standards Committee will be completed in 15 or fewer days, however that period may be longer if deemed necessary. If the period of evaluation exceeds 15 days, an explanation of the circumstances will be provided to the manufacturer.

(B) Notification, License and Use of PDGA Certification

If the submission is not approved, an explanation of the testing failure will be sent to the manufacturer.

The Chair of the Technical Standards Committee will notify the manufacturer, the PDGA Competition Director, the PDGA Oversight Director, the PDGA web site administrator, and the PDGA Administrator that the submission has been sent to the Board for certification. An electronic press release noting the approval will also be sent to all publications that have requested such notification. A listing of submissions certified by the Board of Directors appears in the minutes of their meetings.

After the manufacturer is notified of PDGA approval and certification, the equipment may be used in PDGA-sanctioned competition and the equipment manufacturer must uniquely identify each product. This can be accomplished by placing a distinguishing symbol or name on all products for sale. Indelible markers, hotstamps and mold markings are all acceptable methods of marking discs. Additionally, the words "PDGA Approved" may be placed on the disc and its

packaging, and the PDGA Logo may also be used in direct association with the words "PDGA Approved." As part of the notification of approval and certification, the Technical Standards Committee Chair will issue formal permission to use "PDGA Approved" and the PDGA Logo for this purpose.

All discs permitted for use in a PDGA World Championship must have been formally approved and available in retail outlets at least 30 calendar days prior to the event.

(C) Guidelines for Discs Manufactured for PDGA Competition

To be certified for PDGA competition, discs must:

(1) have a circular, saucer-like configuration, with a flight plate unbroken by perforations and an underside inner rim depth that is between 5 and 12 percent of the outside disc diameter. The flight plate is defined as the upper (or dorsal) section of the disc, which is delineated by the points where the inner rim depth is measured. The saucer-like configuration requires a significant degree of asymmetry between the upper and lower sections, resulting in distinct top and bottom sides of the disc;

(2) be made of solid, non-magnetic plastic material, without any inflatable components;

(3) not be less than 21 cm in outside disc diameter, nor exceed 30 cm in outside disc diameter;

(4) not exceed 8.3 g per cm of outside disc diameter;

(5) not exceed a maximum weight of 200 g;

(6) have a flight plate that does not exceed 0.5 cm in thickness, including any raised features such as lettering, ridges, nipples, and other thickened parts. Discs with a thickened section atop or underneath the flight plate, however, may increase to 1.0 cm in flight plate thickness in this section only, provided that this section: (i) is circular in outline; (ii) is between 5 and 10 cm in diameter for an area with a uniform thickness that is centered on the center point of the disc; and (iii) gradually thins at the outer edge at a slope that averages no more than 50% (or 22.5 degrees) relative to the surrounding part of the flight plate. No part of the underside of the flight plate may be closer than 0.5 cm to the plane defined by the bottom of the rim.

(7) have a smooth surface on the bottom part of the rim; that is, a surface free of any irregularities such as protrusions or depressions. When placed on a flat surface, the rim must have no discernible gaps between itself and the surface on which it is resting.

(8) have a rim area, beyond the top of the flight plate, that does not include any surface elevation that is more than 3mm above the outermost edge of the flight plate.

(9) have a rim width no greater than 2.6 cm (Does not affect discs approved prior to 1/1/08);

(10) have a circular inner rim no less than 15.8 cm in diameter. (Does not affect discs approved prior to 1/1/08).

- (11) have a rim configuration rating of 26.0 or greater;
- (12) pass the leading edge radius test with a 1/16" (1.6 mm) radius gauge;
- (13) have a flexibility rating no greater than 27 lb. (12.25 kg);
- (14) be of a production-type disc available commercially to the public in numbers of at least 500; and,
- (15) be essentially as produced, without any post-production modifications that affect the weight or flight characteristics.

(D) Test Methods for Discs

Metric measurements are employed in characterizing the physical properties of flying discs. All linear measurements are rounded to the nearest mm (0.1 cm); measurements ending in 0.5 mm are rounded up. Weight measurements are rounded to the nearest decigram (0.1 g); measurements ending in 0.05 g are rounded up. The PDGA Technical Standards Committee measures and records the following attributes:

(1) Outside Disc Diameter - This attribute is recorded using a pair of calipers with a 40-cm measuring capacity. Measurements are taken from three or more transects across the outside diameter of the disc, and then averaged. These measurements must vary by no more than 1 mm. The outside disc diameter is used to calculate the maximum weight permitted in PDGA competition.

(2) Height - This attribute is recorded using a pair of calipers. To measure height, a specialized large caliper such as a tree caliper is used.

(3) Rim Depth - This attribute is measured using a metric ruler. The rim depth is defined as the distance between a straight edge placed across both rims and the point where the rim meets the flight plate of the disc.

(4) Rim Thickness - This attribute is recorded using a Vernier caliper. The rim thickness is defined as the distance between the outermost and innermost edges of the rim.

(5) Inside Rim Diameter - This attribute is recorded using a pair of inside calipers. The inside rim diameter, equal to the outside disc diameter minus twice the rim thickness, defines the distance across the flight plate.

(6) Rim Configuration - The rim of the disc is held perpendicular to a contour gauge having 13 probes per cm (such as the Valued ST142). The rim of the disc is then pressed gradually into the gauge to a depth of 5 mm. The resulting movement of each affected probe is measured to the nearest 0.25 mm, and then totaled to produce the rim configuration rating. The ratings of three samples are determined, and the median score is used as the final rating.

(7) Leading Edge Radius - This attribute is evaluated using a 1/16-inch (1.6 mm) radius gauge. To pass this test, the leading edge of the disc must not come in contact with the gauge.

(8) Flexibility - The disc is held on its edge in a vertical position perpendicular to a scale with a precision of at least 2 oz. (56.7 g). The upper rim of the disc is then gradually pressed down within 5 seconds. The flexibility rating is determined at one of two points, depending on how the disc reacts to the application of pressure. For discs that buckle, the flexibility rating corresponds to the point when the maximum weight is registered on the scale. For discs that do not buckle, the rating refers to the weight at the point when the inside rim-to-rim distance is at 50 percent of the disc's diameter. The temperature of the disc is to be no higher than 25 degrees Centigrade (77 F) when the test is performed. The ratings of three samples are determined, and the median score is used as the final rating. Discs that are unable to be bent to 50% of their diameters fail the flexibility test. Manufacturers are required to send samples of the most rigid discs they want considered for PDGA approval.

(9) Flight Plate Thickness - This attribute is measured using a large pair of calipers, such as tree calipers, and a metric ruler. The calipers are placed across the top of the disc and both sides of the bottom of the rim. A ruler is then used to measure the distance from the calipers to the thickest part of the flight plate (typically only on the bottom of the flight plate, but also on top if the caliper on top does not touch the flight plate). This distance is then subtracted from the height of the disc to obtain the flight plate thickness.

(E) Retesting

There are several circumstances under which a disc that has been previously approved is required to be submitted for a retesting procedure:

(1) Mold, Material or Production Technique Changes - If there are changes to a mold that has been producing an approved disc, the discs produced by the changed mold may have to be retested for approval. Not all such changes require approval. Retesting is only required if a mold includes the addition or removal of a new structural feature such as a bead, or results in a measurement that may violate any of the technical standards.

(2) Name Changes - If a disc that has previously been approved for PDGA competition is to be marketed under a different name, retesting is required. This process, which requires a retesting fee, will result in the disc being separately listed on the PDGA approved-disc list.

It is the responsibility of the manufacturer to notify the Technical Standards Committee Chair when the circumstances as described above dictate that a disc they are producing requires retesting. The Chair may also call for submission of a disc for retesting if he or she becomes aware or suspects that a manufacturer has been producing a disc that meets one or more of the circumstances that require retesting. Discs requested for retesting must be submitted to the Chair within 30 days to ensure PDGA approval is maintained.

The requirements, procedures, schedule, and fees of the retesting procedure are identical to that of the initial testing procedure outlined above. If it is demonstrated that the disc in question does not meet the requirements for retesting there will be no fee due from the manufacturer.

(II) DISC-CATCHING TARGETS <To be updated in 2008>

(A) General Configuration

All disc-catching targets shall be composed of a basket and may have a deflection or entrapment apparatus above the basket.

(B) Basket

The basket shall have a circular rim of no greater than 67 cm in diameter as measured on the outside edge of the rim, with a minimal basket depth of 15 cm. The basket rim shall have an average height of between 76 and 89 cm above the ground. Over slope, height compliance is determined by averaging the distance to the ground directly below the top edge of the rim at four equidistant points around the basket. Baskets may be placed at a lower height on courses designed primarily for junior play.

(C) Deflection or Entrapment Apparatus

(1) A disc-catching device may incorporate some sort of deflection device in its design. This apparatus may be flexible or solid.

(2) The maximum width of a deflection apparatus shall be 71 cm.

(D) Other Acceptable Targets

PDGA reserves the right to declare reasonable and prudent standards for certification of object and other target formats, as it deems appropriate.

(E) Testing Procedure

The requirements, procedures, and schedule of the target testing procedure are identical to that of the initial testing procedure for discs except for the following:

- Only one sample of the target need be submitted to the Technical Standards Committee Chair. (Jeff Homburg, 4502 E 16th St, Tucson AZ, USA 85711 Phone (520) 571-7787).

- The tolerances for basket measurements are plus or minus 2 cm.

- The testing and approval fee is \$350 for each disc-catching target submitted. This check is to be sent to the PDGA office (3841 Dogwood Lane, Appling GA USA 30802-3004 Phone (706) 261-6342).

- If the target is not approved, an explanation of the testing failure and a refund of \$175 will be sent to the manufacturer.

(F) Exclusions and Limitations

PDGA target certification shall not be construed to judge whether or not any certified basket or target is free of patent infringement.

PDGA target certification does not necessarily mean that a certified target is appropriate for use in all PDGA tournaments or events. The final determination of target types and configurations used in competition may be determined by PDGA event regulations or the determination of tournament directors and competition officials.

(G) Retesting

There are several circumstances when a target that has been previously approved must be submitted for retesting:

(1) Configuration Changes - If there are changes in the configuration of a target that has been previously approved, the newly configured target may have to be retested for approval. Not all such changes require approval. Retesting is only required if the new configuration includes the addition of a new component or results in an illegal measurement on any of these specifications.

(2) Name Changes - If a target that has previously been approved for PDGA competition is to be marketed under a different name, retesting is required.

It is the responsibility of the manufacturer to notify the Technical Standards Committee Chair when the circumstances as described above dictate that a target may need retesting. The Chair may also call for submission of a target for retesting if he or she becomes aware that a manufacturer has been producing a target that meets one or more of the circumstances that require retesting.

The requirements, procedures, schedule, and fees of the retesting procedure are identical to that of the initial testing procedure outlined above. If it is demonstrated that the target in question does, in fact, not meet the requirements for retesting there will be no fee due from the manufacturer.

(III) PUBLICATION

The Technical Standards Committee is to make available a list of all equipment that has been approved for competition, including identification of which discs and targets are currently being produced for sale. This list will be published on the PDGA web site and by the official PDGA magazine, as deemed appropriate to inform the membership.

(IV) MAILING AND CONTACT AND PAYMENT INFORMATION

Samples to be tested are to be sent to the Technical Standards Committee Chair, (Jeff Homburg, 4502 E 16th St, Tucson AZ, USA 85711 Phone (520) 571-7787). At the same time, a \$300.00 check is to be sent to the PDGA office (3841 Dogwood Lane, Appling GA USA 30802-3004 Phone (706) 261-6342). The check should be made payable to the PDGA.

An additional fee of \$100 is required for any disc assigned a new name by the manufacturer, excluding custom hot-stamped discs. If the status of a particular disc is in question, the Technical Standards Committee will make a final determination as to which discs are or are not custom discs. The PDGA may test any product at its own expense at any time.

Manufacturers who are in their first calendar year of submitting discs for PDGA approval receive a 50% discount on testing fees.

Fees and contact information are subject to announced change.