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VIPAC PLUMBING PRODUCTS LABORATORY

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|---------------|---------------------|------------------|---|
| Client | Spa World Melbourne | Report No | 30P-14-0203-TRP-364191-1- Double CMP Filter Housing |
|---------------|---------------------|------------------|---|

TEST REPORT


ITEM TESTED: Filter Housing


TESTED FOR: Spa World Melbourne
310 - 312 South Gippsland Highway
Dandenong South, VIC 3175 Australia

TESTED TO: Clause 3.5, 5.5 & 5.6 of AS 1926.3:2010
Clause 22.102 of AS/NZS 3350.2.60:2000 (+A4)

PRODUCT: Spa world, Double CMP filter Housing

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Project Engineer

REVIEWED BY  Date 19 June 2015
Mr. Russel Dower
Approved Signatory

1. DOCUMENT CONTROL

The following details pertain to test reports with document number 30P-14-0203-TRP-364191-1- Double CMP Filter Housing

| Issue Date | Revision No. | Revision Description |
|--------------|--------------|---|
| 16 June 2015 | 00 | Initial Issue |
| 16 June 2015 | 01 | Supersedes Initial Issue (Spa Models Added) |

2. INTRODUCTION

The VIPAC Plumbing Products Laboratory tested a spa skimming device to AS 1926.3-2010. The product was selected and supplied by Spa World Melbourne for testing.

3. APPLICABLE DOCUMENTS

The tests and data analysis were carried out in accordance with the following standards.

| | |
|----------------------|--|
| AS 1926.3-2010 (+A1) | Swimming pool safety, Part 3 Water circulation systems |
|----------------------|--|



4. SPECIMENS DESCRIPTIONS

The specimen is designated in this report as follows:

| Product Code | Description |
|---------------------------|---|
| Double CMP Filter Housing | <p>Spa world double CMP Filter Housing</p> <p>Tested product is for the following Spa Models, as declared by Spa World:</p> <ul style="list-style-type: none"> • Fisher 5 • Fisher 5 plus • Fisher Play • Fisher Swim • V2160 • V2160L • V2300 • V2300L • Modena • Sundale • V3000L • V3160L • Eden • Tranquility • Mandalay • Mackay • Mekong • Utopia • Lagoon • Harmony • Nirvana • Bliss • Dream • V3000 • V3160 |



Double CMP Filter Housing

5. PERFORMANCE

Clause 3.5 of AS 1926.3-2010 (+A1) – Child Resistant lid

A skimmer box lid that, when installed in its designed positions cannot be lifted off vertically with a force less than 100N or has a locking mechanism

| Product | Requirement | Result | Conformity to Clause 3.5 of AS 1926.3-2010 (+A1) |
|----------------------------------|---|--|--|
| Double CMP Filter Housing | The lid of the skimmer box shall have a locking mechanism, or it cannot be lifted off vertically with a force less than 100N. | The filter housing tested does not incorporate an assessable opening from the top. | NA |

Clause 5.6.2 – Alternative skimming system - Requirements

Clause 5.6.2 (a) of AS 1926.3:2010

| Clause | Requirements | Result | Conformity to Clause 5.6.2(a) of AS 1926.3:2010 |
|-----------|--|--|---|
| 5.6.2 (a) | Spa shall be tested to Appendix B of AS 1926.3:2010 | Spa tested with one supplied pump and one Davey 3 hp pump operating at maximum flow rate | Conforms* |
| | Suction shall not measure 12kPa during test. | Measured suction pressure was 0 kPa | |
| | Force to remove blocking element shall not be greater than 50 N. | Force to remove body blocking element was 23 N. Recorded Flow = 456 L/min | |

*Note: The tested spa bath is sold with two 2.5 hp pumps provided. For testing, a 3 hp pump was installed in the suction line. This spa pump, which is not supplied with the spa, has the highest flow rate commercially available, and can be considered to achieve the 20% greater flow rate, as required by the standard.

Clause 5.6.3 – Permanent Protective Barrier

An alternative skimming device other than one complying with Clause 5.6.4 shall be fitted with a permanent protective barrier to minimize the risk of body entrapment and/or evisceration.

| Product | Requirement | Result | Conformity to Clause 5.6.3 of AS 1926.3-2010 (+A1) |
|----------------------------------|--|--|--|
| Double CMP Filter Housing | An alternative skimming device other than one complying with Clause 5.6.4 shall be fitted with a permanent protective barrier to minimize the risk of body entrapment and/or evisceration. | Skimming device tested is fitted with a permanent protective barrier | Conforms |

Clause 5.5 Venting of skimmer boxes

| Clause | Requirements | Result | Conformity to Clause 5.5 of AS 1926.3:2010 (+A1) |
|---------|---|--|--|
| 5.5 (a) | The lids of all skimmer boxes shall be vented to atmosphere. | No lid found on the filter unit tested | NA |
| 5.5 (b) | Skimmer boxes without a basket access hole and/or lid in the top shall be vented to atmosphere in accordance with Figure 3. | Skimmer box is vented to atmosphere | Conforms |
| 5.5 (c) | The opening of a skimmer box to the pool water shall not be a substitute for a vent to atmosphere. | Skimmer box was vented to atmosphere not from the opening of the box to the pool water | Conforms |
| 5.5 (d) | Vents shall have a clear opening area of not less than 315 mm ² . Where more than one vent is used the clear opening area shall be an aggregate of not less than 315 mm ² . | Measured area is 184.4 X 2=369.6 mm ² | Conforms |



The filter housing has been modified by adding one extra vent to meet the minimum opening area of 315mm². Client has declared that the dimensions of new vent components are same as original sample measured.

Clause 22.102 of AS/NZS 3350.2.60:2000(+A4) – Hair entrapment test for whirlpool baths

Test is carried out as detailed below.

The appliance is installed in accordance with the instructions for installation and filled as specified for normal operation.

50 g of medium or fine natural human hair are attached to a wooden rod, 25 mm in diameter and 300 mm in length, the free length of the hair being 400 mm. The hair is saturated for at least 2 min in the bath water. The free end of the hair is placed over the suction opening. The appliance is supplied at rated voltage. During operation, the hair is moved from side to side for up to 2,5 min in an attempt to get it sucked completely into the pipe. The rod is pulled in order to withdraw the hair from the water and the pull force is measured with.

- the rod pulled vertically.
- the rod pulled at an angle of approximately 40° to the vertical.

If the bath is provided with a detachable cover for the suction opening, the test is also carried out with the cover in place. During the test, the cover may be displaced when it is swept by the hair. The test is carried out five times. The force shall not exceed 20 N.

Extract from AS/NZS 3350.2.60:2000(+A4) Test in Clause 22.102

| Clause | Requirements | Result | Conformity to Clause 22.102 of AS/NZS 3350.2.60:2000 |
|--------|--|--|--|
| 22.102 | The sample shall meet the requirements of Clause 22.102. Force in all tests shall not exceed 20N. | Test was performed five times, in directions of both vertical and 40° from vertical. The maximum amount of force required to pull the test piece from the spa was 12 N. | Conforms |