

Water efficient products – Rating and labelling

This Joint Australian/New Zealand Amendment was prepared by Joint Technical Committee WS-032, Water Efficient Appliances. It was approved on behalf of the Council of Standards Australia on DD Month 202X and by the New Zealand Standards Executive on DD Month 202X.

Summary

This Amendment applies to the following elements:

- Preface
- Clauses 1.3.2, 1.4.101, 1.4.102, 2.5.4.4, 2.5.4.6, 2.5.4.101, 2.5.4.102, 2.5.4.103, 3.3.101, 3.3.2, 3.3.3, 3.4.1, 3.4.101, 3.5.2.1, 3.5.4.3, 3.5.4.4, 3.5.4.101, 3.6, 4.4.101, 4.6, 5.6, 6.2.2, 6.4.2, 6.4.101, 6.6, 7.4.3, 7.4.101, 7.6, 8.2.101, 8.3.1, 8.4, 9.4.1, 9.5, 10.3.1, 10.4
- Tables 3.1, 3.2, 7.1, 9.1
- Figures 3.101, 4.2
- Bibliography

Amendment Details

AS/NZS 6400:2016 is amended as follows. The amendments should be inserted in the locations as instructed.

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Element	Instruction/New text
Preface	1 Delete the last sentence in the fourth paragraph and add the following: In Australia, lavatory equipment, showers, tap equipment and urinal equipment are required to comply with minimum water efficiency requirements set out in the <i>National Construction Code, Volume Three — Plumbing Code of Australia</i> (NCC). Dishwashers and washing machines are also required to comply with minimum water efficiency requirements set out in this Standard. In New Zealand the requirements of this document apply.
	2 Fifth paragraph, <i>delete</i> items (a) and (b) and <i>replace</i> with the following: (a) The minimum water efficiency requirements for product registration have been aligned with the requirements of the NCC. (b) The previous 4 Star rating for showers has been split in two to permit the registration of 5 Star showers that meet the extra performance test requirements of this Standard.
CI 1.3.2	In the reference list, <i>delete</i> the following: PCA Plumbing Code of Australia
CI 1.4.101 (new)	After “1.4.2 Actuator”, <i>add</i> the following: 1.4.101 Building Buildings and their classes as defined in the NCC.
CI 1.4.102 (new)	After “1.4.6 Model code”, <i>add</i> the following: 1.4.102 Model id See Model code (1.4.6). NOTE: Model ids are used as the unique identifiers for whitegoods.
CI 2.5.4.4	<i>Delete</i> item (b) and <i>replace</i> with the following: (b) The product’s registered model name shall be printed on the packaging.
CI 2.5.4.6	1 <i>Delete</i> heading and <i>replace</i> with the following: 2.5.4.6 Advertising/print media/electronic and physical display requirements
	2 <i>Delete</i> the first paragraph and <i>replace</i> with the following: All WELS products shall be profiled or displayed such that the required WELS information has a clear and obvious connection to the registered product (see Clause 2.5.4.5). This includes product specifications, brochures, display cards, advertising, magazines, catalogues, editorials, physical and electronic displays.
	3 <i>Delete</i> the second paragraph and <i>replace</i> with the following: A proportionally scaled image of a WELS label or text advice (see Clause 2.5.4.5 for text advice requirements) may be used if it is compliant with the requirements of this Standard, including requirements relating to readability.
	4 <i>Delete</i> the third paragraph and <i>replace</i> with the following: The registered model name and/or the WELS registration number shall be prominent and visible with a clear and obvious connection to the product at all points of supply excluding packaging.
CI 2.5.4.101 (new)	After Clause 2.5.4.6, <i>add</i> the following: 2.5.4.101 Building development requirements Where a development is being supplied with WELS products, information shall be provided for each WELS product being offered for supply. Due to the nature of the building and construction industry and supply chains, there are differences in the level of information that can reasonably be provided at each stage of supply during the construction process.
CI 2.5.4.102 (new)	After Clause 2.5.4.101, <i>add</i> the following: 2.5.4.102 Requirements if WELS product information is not known The following minimum WELS product information shall be available as set out in Table 2.101. The WELS information does not have to be physically displayed, but it shall be available at the time of request at all points of supply.

TABLE 2.101 — MINIMUM WELS PRODUCT INFORMATION WHERE PRODUCTS ARE NOT KNOWN

WELS product type	WELS Star Rating
Dishwasher	
Lavatory	
Shower	
Tap (Basin)	
Tap (Kitchen)	
Tap (Laundry)	
Urinal	
Clothes Washer	

NOTE: The WELS star ratings should match that provided with the development application.

CI 2.5.4.103 (new)

After Clause 2.5.4.102, *add* the following:

2.5.4.103 Requirements if WELS product information is known

The following minimum WELS product information shall be provided as set out in Table 2.102.

All WELS products shall be profiled or displayed such that the required WELS information has a clear and obvious connection to the registered product at all points of supply.

TABLE 2.102 — MINIMUM WELS PRODUCT INFORMATION WHERE PRODUCTS ARE KNOWN

WELS Product Type	WELS Registration Number	Organization WELS Licence Number	WELS Star Rating	Water Consumption (per text advice requirements)
Dishwasher				
Lavatory				
Shower				
Tap (Basin)				
Tap (Kitchen)				
Tap (Laundry)				
Urinal				
Clothes Washer				

CI 3.3.101 (new)

After Clause 3.3.1, *add* the following:

3.3.101 Shower head only

The critical specifications and components for shower heads shall be as follows:

- Shower head, including spray hole number, layout and size.
- Flow controller, including location, brand, type and size.

NOTE: See Figures 3.1 and 3.2 for a typical shower head.

CI 3.3.2

Delete the heading "Fixed shower" and *replace* with the following:

3.3.2 Shower with a fixed arm (fixed shower)**CI 3.3.3**

Delete the heading "Adjustable shower" and *replace* with the following:

3.3.3 Shower with an adjustable arm (adjustable shower)**CI 3.4.1**

Delete "4 Star" *replace* with "5 Star".

CI 3.4.101 (new)

After 3.4.4, *add* the following:

3.4.101 Minimum water efficiency

The water Star rating of showers shall be not less than 3 when determined in accordance with Clause 3.4.3 for a high pressure shower or Clause 3.4.4 for a low pressure shower.

NOTE 1: For combination showers the minimum water efficiency performance requirement is applicable to each shower head or the combined flow rate if more than one shower head can operate at once.

NOTE 2: NCC Volume Three specifies the water efficiency requirements for showers.

NOTE 3: Minimum performance requirements for showers are not applicable to a shower intended to provide rapid drenching of a person for emergency purposes.

NOTE 4: Clause 3.4.5 is only applicable to showers offered for sale in Australia.

Table 3.1

Delete Table 3.1 and *replace* with the following:

Table 3.1 — HIGH PRESSURE SHOWER RATING TABLE									
Water consumption unit	0 Star (warning)	0 Star (warning)	2 Star	3 Star	Compliant with spray force and coverage tests		Not Star rated		
	Range A	Range B	Range C	Range D	4 Star	5 Star	Range E	Range F	Range G
					Range E	Range F			
L/min	More than 16.0	More than 12.0 but not more than 16.0	More than 9.0 but not more than 12.0	More than 7.5 but not more than 9.0	More than 6.0 but not more than 7.5	More than 4.5 but not more than 6.0	More than 6.0 but not more than 7.5. Fails spray force and/or coverage tests	More than 4.5 but not more than 6.0. Fails spray force and/or coverage tests	4.5 or less

NOTE 1 All high pressure showers in flow rate Ranges E and F shall—

(a) be registered at 4 Star or 5 Star respectively if compliant with these approved tests; and

(b) be registered as Not Star rated if not compliant with these tests.

NOTE 2 Showers in flow rate Range G shall be rated as Not Star rated as they are below the recommended minimum flow rate for an effective shower (see Figure 3.7 for sample label).

CI 3.5.2.1 In the heading, after “4”, add “, 5”

CI 3.5.4.3 Delete paragraph and replace with the following:

Labels shall be designed in accordance with Figure 3.7 for showers that either—

- (a) meet the flow rate requirements for a 4 or 5 Star rating when tested at high pressure but do not comply with the requirements of the force of spray and coverage tests; or
- (b) have a flow rate of 4.5 L/m or less.

CI 3.5.4.4 Delete items (a) and (b) and replace with the following:

- (a) meet the flow rate requirements for a 4 or 5 Star rating when tested at low pressure but do not comply with the requirements of the force of spray and coverage tests; or
- (b) have a flow rate of 4.5 L/m or less.

CI 3.5.4.101 (new) After Clause 3.5.4.5, add the following:

3.5.4.101 Combination Showers—Label and additional label information

The label for combination showers, where only one shower head can operate at a time, shall be labelled with the additional information label designed in accordance with Figure 3.101.

The WELS label (see Figure 3.101) shall provide the Star rating, performance and shower component (e.g. overhead shower) for the shower with the highest nominal flow rate. The additional information box (see Figure 3.101) shall provide the Star rating, performance and shower component (e.g. hand shower) for the shower with the lowest nominal flow rate.

Figure 3.101 (new) After Clause 3.5.4.101, add the following:

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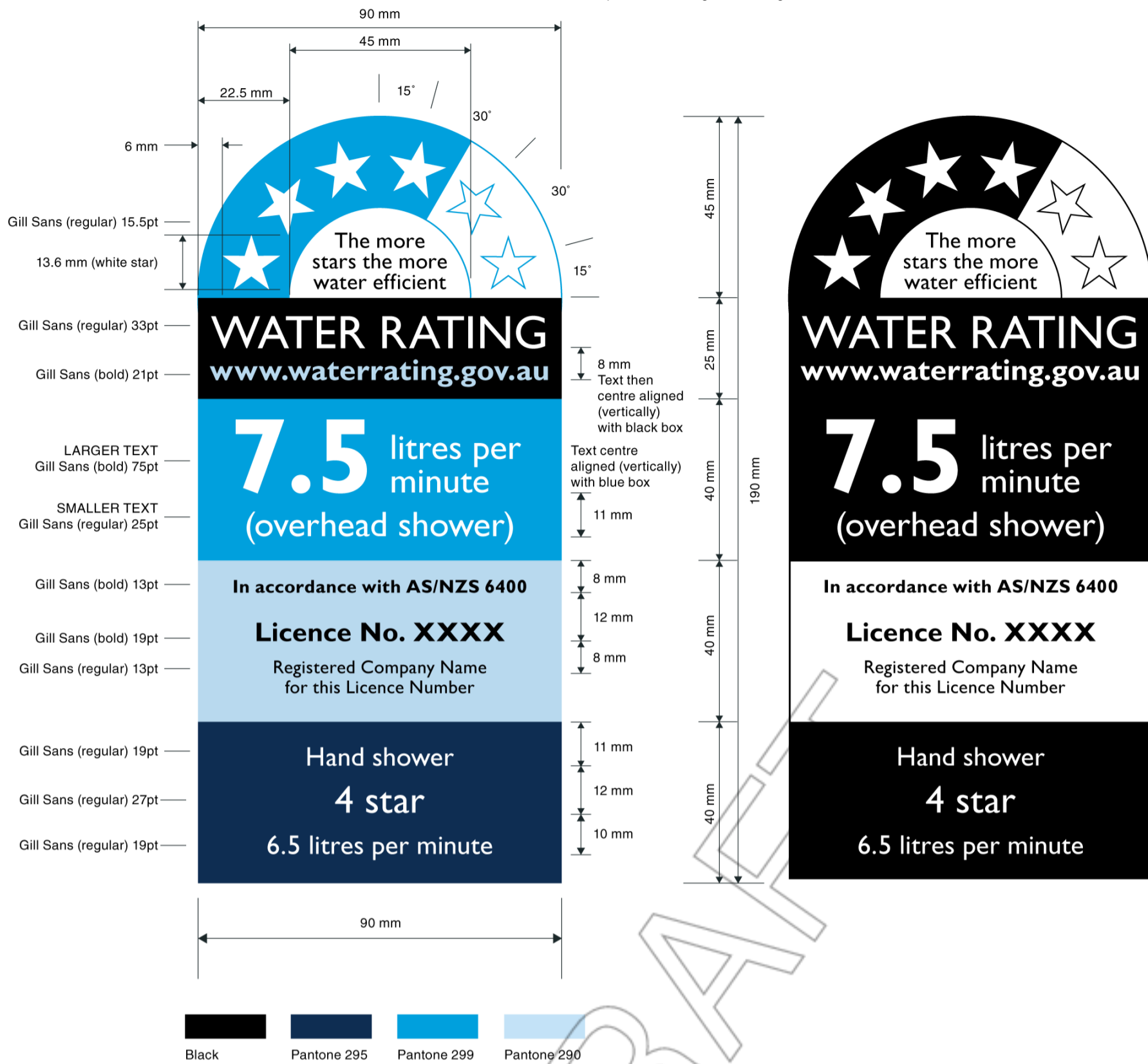


Figure 3.101 — COMBINATION SHOWERS—LABEL AND ADDITIONAL INFORMATION

CI 3.6

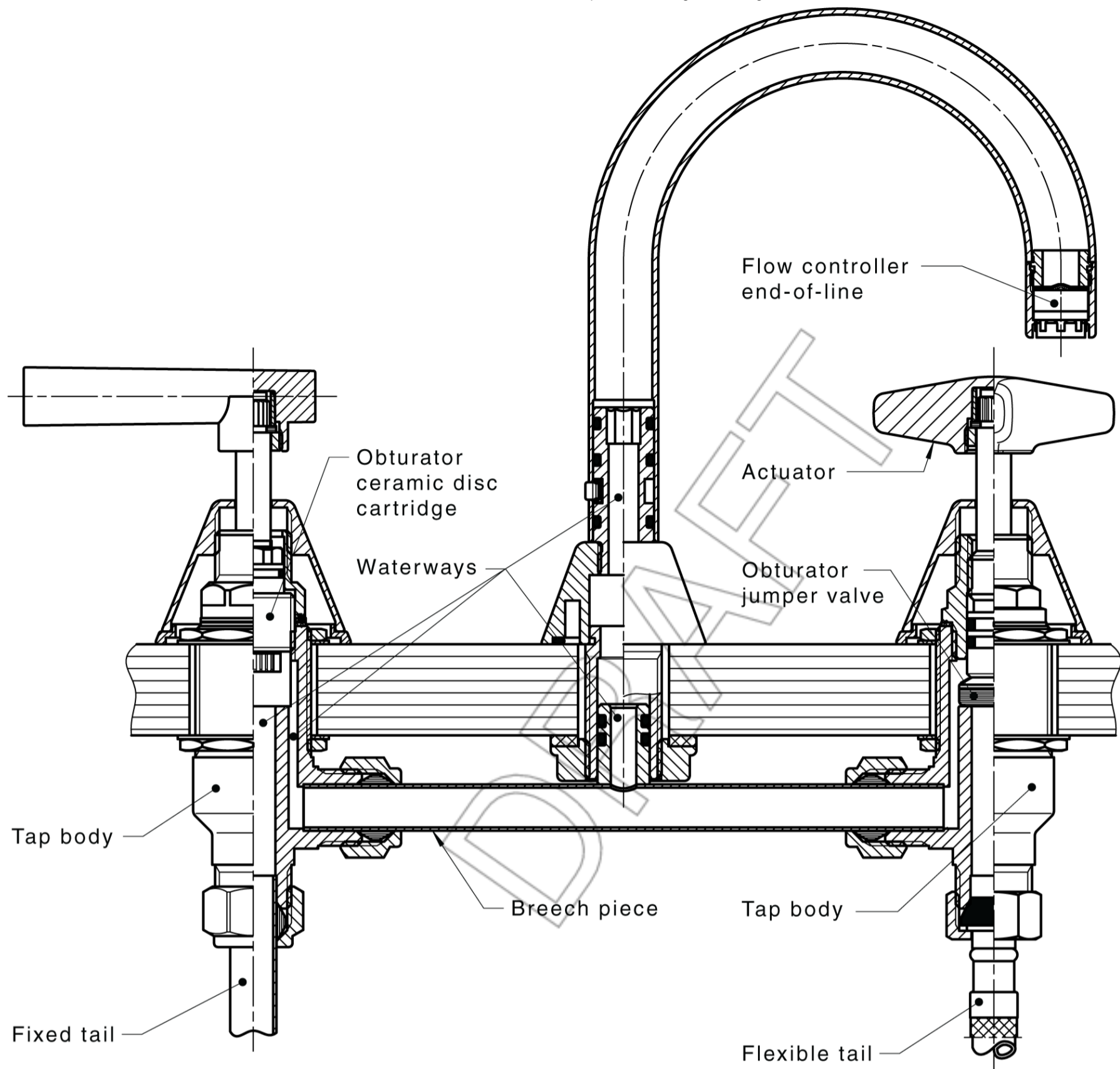
Delete list items (d) and (e) and replace with the following:

- (d) WELS registration number.
- (e) If required by the WELS Regulator, the contents of the additional information label as specified in Clause 2.5.4.3.

NOTE: Model name and/or brand may be included for traceability but are not required.

Figure 4.2

Delete Figure 4.2 and replace with the following:

**CI 4.4.101 (new)**

After Clause 4.4.3, *add* the following:

4.4.101 Minimum water efficiency

The water Star rating of tap equipment shall be not less than 3 when determined in accordance with Clause 4.4.3.

NOTE 1: Clause 4.4.101 is only applicable to tap equipment offered for sale in Australia.

NOTE 2: NCC Volume Three specifies the water efficiency requirements for tap equipment.

CI 4.6

Delete list items (d) and (e), including note, and *replace* with the following:

- (d) WELS registration number.
- (e) If required by the WELS Regulator, the contents of the additional information label as specified in Clause 2.5.4.3.

NOTE: Model name and/or brand may be included for traceability but are not required.

CI 5.6

Delete list items (d) and (e), including note, and *replace* with the following:

- (d) WELS registration number.
- (e) If required by the WELS Regulator, the contents of the additional information label as specified in Clause 2.5.4.3.

NOTE: Model name and/or brand may be included for traceability but are not required.

CI 6.2.2

Items (a), (b), (c), (d), (e), (g), *delete* "(iii) Close coupled cistern (CCC)".

CI 6.4.2

Delete items (a), (b), (c) and (d) and *replace* with the following:

- (a) for single-flush cisterns—the average flush volume of the full-flush discharge volumes, determined in accordance with AS 1172.2;
- (b) for dual-flush cisterns—the average flush volume of the full-flush discharge flush volumes and reduced flush discharge volumes, determined in accordance with AS 1172.2;
- (c) for a nominated combination of WC pan and single-flush flushing device—the average flush volume of the full-flush discharge volumes, determined in accordance with AS 1172.2;
- (d) for a nominated combination of WC pan and dual-flush flushing device—the average flush volume of the full-flush discharge flush volumes and reduced flush discharge volumes, determined in accordance with AS 1172.2.

CI 6.4.101 (new)

After 6.4.3, *add* the following:

6.4.101 Minimum water efficiency

The water Star rating of dual-flush cistern lavatory equipment shall not be less than 3 when determined in accordance with Clause 6.4.3.

NOTE 1: Clause 6.4.101 is only applicable to dual-flush lavatory equipment offered for sale in Australia.

NOTE 2: NCC Volume Three specifies the water efficiency requirements for lavatory equipment.

CI 6.6

Delete item (e) and *replace* with the following:

(e) WELS registration number.

NOTE: Model name and/or brand may be included for traceability but are not required.

CI 7.4.3

Delete Note.

Table 7.1

Delete Table 7.1 and *replace* with the following:

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Table 7.1 — WATER RATING TABLE	
Consumption unit	Volume in litres (L) collected from a single flush discharge which covers marked surface of either a single stall unit or 600 mm length of continuous urinal wall ^a
0 Star (warning)	<p>(a) Volume discharge more than 2.5 L:</p> <ul style="list-style-type: none"> (i) For serving a single stall or 600 mm length of continuous urinal wall. (ii) Incorporating either conscious, demand-driven or smart-demand flush operating devices. <p>(b) Volume discharge more than 5.0 L:</p> <ul style="list-style-type: none"> (i) For serving two single stalls or 1200 mm length of continuous urinal wall. (ii) Incorporating either conscious, demand-driven or smart-demand flush operating devices. <p>(c) Volume discharge more than 7.5 L:</p> <ul style="list-style-type: none"> (i) For serving three single stalls or 1800 mm length of continuous urinal wall. (ii) Incorporating either conscious, demand-driven or smart-demand flush operating devices. <p>(d) Failing the flush discharge coverage and splash performance requirements.</p> <p>(e) Having a hands free activation device with a sensitivity field greater than 300 mm radius from front of urinal or wider than width of stall(s) or length of continuous urinal wall the flushing device is serving.</p>
1 Star	<p>(a) Volume discharge not more than 4.0 L:</p> <ul style="list-style-type: none"> (i) For serving two single stalls or 1200 mm length of continuous urinal wall. (ii) Incorporating either conscious, demand-driven or smart-demand flush operating devices, and hands free activation device with a sensitivity field not greater than 300 mm radius from front of urinal or wider than two single stalls or 1200 mm length of continuous urinal wall^b. <p>(b) Volume discharge not more than 7.5 L:</p> <ul style="list-style-type: none"> (i) For serving three single stalls or 1800 mm equivalent width of continuous urinal wall. (ii) Incorporating either conscious, demand-driven or smart-demand flush operating devices, and hands free activation device with a sensitivity field not greater than 300 mm radius from front of urinal or wider than three single stalls or 1800 mm length of continuous urinal wall^b.
2 Star	<p>Volume discharge not more than 2.5 L:</p> <ul style="list-style-type: none"> (a) For serving a single stall or 600 mm length of continuous urinal wall. (b) Incorporating either conscious, demand-driven or smart-demand flush operating devices, and hands free activation device with a sensitivity field not greater than 300 mm radius from front of urinal^b.
3 Star	<p>Volume discharge not more than 2.0 L:</p> <ul style="list-style-type: none"> (a) For serving a single stall or 600 mm length of continuous urinal wall. (b) Incorporating either conscious, demand-driven or smart-demand flush operating devices, and hands free activation device with a sensitivity field not greater than 300 mm radius or width of single stall or 600 mm length of continuous urinal wall^b.
4 Star	<p>Volume discharge not more than 1.5 L:</p> <ul style="list-style-type: none"> (a) For serving a single stall or 600 mm length of continuous urinal wall. (b) Incorporating smart-demand flush operating device, and hands free activation device with a sensitivity field not greater than 300 mm radius or width of single stall or 600 mm length of continuous urinal wall^b.
5 Star	<p>Volume discharge not more than 1.0 L:</p> <ul style="list-style-type: none"> (a) For serving a single stall unit or 600 mm length of continuous urinal wall. (b) Incorporating smart-demand flush operating device, and hands free activation device with a sensitivity field not greater than 300 mm radius or width of single stall or 600 mm length of continuous urinal wall^b.
6 Star	<p>Volume discharge not more than 1.0 L:</p> <ul style="list-style-type: none"> (a) For serving a single stall or 600 mm length of continuous urinal wall. (b) Incorporating smart-demand flush operating device and a urine-sensing activation device^b.

^a Refer to AS/NZS 3982:1996, Figures A1 and B1.

^b See Clause 1.4.18 in this Standard.

CI 7.4.101 (new)

After Table 7.1, *add* the following:

7.4.101 Minimum water efficiency

The water Star rating of urinal equipment shall be not less than 2 when determined in accordance with Clause 7.4.4.

NOTE 1: NCC Volume Three requires that the quantity of water discharged for sanitary flushing be no more than 2.5 L for each single stall or each 600 mm length of continuous urinal wall.

NOTE 2: Clause 7.4.101 is only applicable to urinal equipment offered for sale in Australia.

NOTE 3: NCC Volume Three specifies the water efficiency requirements for urinal equipment.

CI 7.6

Delete list items (d) and (e), including note, and *replace* with the following:

- (d) WELS registration number.
- (e) If required by the WELS Regulator, the contents of the additional information label as specified in Clause 2.5.4.3.

NOTE: Model name and/or brand may be included for traceability but are not required.

CI 8.2.101 (new)

After Table 8.1, *add* the following:

8.2.101 Minimum water efficiency

The water Star rating index of a dishwasher machine with a place setting capacity of 9 or greater shall be not less than 3.0 when determined in accordance with Clause 8.2.3.

The water Star rating index of a dishwasher machine with a place setting of less than 9 shall be not less than 2.5 when determined in accordance with Clause 8.2.3.

NOTE: Clause 8.2.101 is only applicable to dishwasher machines offered for sale in Australia.

CI 8.3.1

Delete the third paragraph and *replace* with the following:

The water consumption number on the label shall be rounded up to the nearest one decimal place. For example, if the water consumption is 13.14 L, the water consumption number on the label shall be 13.2 L.

CI 8.4

Delete list items (e) and (f), including note, and *replace* with the following:

- (e) WELS registration number.
- (f) If required by the WELS Regulator, the contents of the additional information label as specified in Clause 2.5.4.3.

NOTE: Model name and/or brand may be included but are not required.

Table 9.1

Delete Table 9.1 and *replace* with the following:

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Table 9.1 — CLOTHES WASHING MACHINES WATER CONSUMPTION BY STAR RATING (FOR INFORMATION ONLY)

Load capacity (kg)	Maximum water consumption by load capacity for a specified Star rating										
	1 Star	1.5 Star	2 Star	2.5 Star	3 Star	3.5 Star	4 Star	4.5 Star	5 Star	5.5 Star	6 Star
1.0	30.0	25.1	21.0	17.6	14.7	12.3	10.3	8.6	7.2	6.0	5.0
1.5	45.0	37.6	31.5	26.4	22.1	18.4	15.4	12.9	10.8	9.0	7.6
2.0	60.0	50.2	42.0	35.1	29.4	24.6	20.6	17.2	14.4	12.1	10.1
2.5	75.0	62.7	52.5	43.9	36.8	30.7	25.7	21.5	18.0	15.1	12.6
3.0	90.0	75.3	63.0	52.7	44.1	36.9	30.9	25.8	21.6	18.1	15.1
3.5	105.0	87.8	73.5	61.5	51.5	43.0	36.0	30.1	25.2	21.1	17.6
4.0	120.0	100.4	84.0	70.3	58.8	49.2	41.2	34.4	28.8	24.1	20.2
4.5	135.0	112.9	94.5	79.1	66.2	55.3	46.3	38.7	32.4	27.1	22.7
5.0	150.0	125.5	105.0	87.8	73.5	61.5	51.5	43.0	36.0	30.1	25.2
5.5	165.0	138.0	115.5	96.6	80.9	67.6	56.6	47.4	39.6	33.1	27.7
6.0	180.0	150.6	126.0	105.4	88.2	73.8	61.7	51.7	43.2	36.2	30.3
6.5	195.0	163.1	136.5	114.2	95.6	79.9	66.9	56.0	46.8	39.2	32.8
7.0	210.0	175.7	147.0	123.0	102.9	86.1	72.0	60.3	50.4	42.2	35.3
7.5	225.0	188.2	157.5	131.8	110.3	92.2	77.2	64.6	54.0	45.2	37.8
8.0	240.0	200.8	168.0	140.6	117.6	98.4	82.3	68.9	57.6	48.2	40.3
8.5	255.0	213.3	178.5	149.3	125.0	104.5	87.5	73.2	61.2	51.2	42.9
9.0	270.0	225.9	189.0	158.1	132.3	110.7	92.6	77.5	64.8	54.2	45.4
9.5	285.0	238.4	199.5	166.9	139.7	116.8	97.8	81.8	68.4	57.3	47.9
10.0	300.0	251.0	210.0	175.7	147.0	123.0	102.9	86.1	72.0	60.3	50.4
10.5	315.0	263.5	220.5	184.5	154.3	129.1	108.0	90.4	75.6	63.3	52.9
11.0	330.0	276.1	231.0	193.3	161.7	135.3	113.2	94.7	79.2	66.3	55.5
11.5	345.0	288.6	241.5	202.0	169.0	141.4	118.3	99.0	82.8	69.3	58.0
12.0	360.0	301.2	252.0	210.8	176.4	147.6	123.5	103.3	86.4	72.3	60.5
12.5	375.0	313.7	262.5	219.6	183.7	153.7	128.6	107.6	90.0	75.3	63.0
13.0	390.0	326.3	273.0	228.4	191.1	159.9	133.8	111.9	93.6	78.3	65.5
13.5	405.0	338.8	283.5	237.2	198.4	166.0	138.9	116.2	97.2	81.4	68.1
14.0	420.0	351.4	294.0	246.0	205.8	172.2	144.1	120.5	100.8	84.4	70.6
14.5	435.0	363.9	304.5	254.8	213.1	178.3	149.2	124.8	104.4	87.4	73.1
15.0	450.0	376.5	315.0	263.5	220.5	184.5	154.4	129.1	108.0	90.4	75.6
15.5	465.0	389.0	325.5	272.3	227.8	190.6	159.5	133.4	111.6	93.4	78.2
16.0	480.0	401.6	336.0	281.1	235.2	196.8	164.6	137.7	115.2	96.4	80.7
16.5	495.0	414.1	346.5	289.9	242.5	202.9	169.8	142.1	118.8	99.4	83.2
17.0	510.0	426.7	357.0	298.7	249.9	209.1	174.9	146.4	122.5	102.5	85.7
17.5	525.0	439.2	367.5	307.5	257.2	215.2	180.1	150.7	126.1	105.5	88.2
18.0	540.0	452.8	378.0	316.3	264.6	221.4	185.2	155.0	129.7	108.5	90.8
18.5	555.0	464.3	388.5	325.0	271.9	227.5	190.4	159.3	133.3	111.5	93.3
19.0	570.0	476.9	399.0	333.8	279.3	233.7	195.5	163.6	136.9	114.5	95.8
19.5	585.0	489.4	409.5	342.6	286.6	239.8	200.7	167.9	140.5	117.5	98.3
20.0	600.0	502.0	420.0	351.4	294.0	246.0	205.8	172.2	144.1	120.5	100.8

NOTE The water consumption for a load capacity of 1 kg is used for the base water consumption.

CI 9.4.1

Delete the third paragraph and replace with the following:

The water consumption number on the label shall be rounded up to the nearest whole number. For example, if the water consumption is 85.6 L, the water consumption number on the label shall be 86 L.

CI 9.5

Delete list items (f) and (g), including note, and replace with the following:

(f) WELS registration number.

(g) If required by the WELS Regulator, the contents of the additional information label as specified in Clause 2.5.4.3.

NOTE: Model name and/or brand may be included but are not required.

CI 10.3.1

Delete the last paragraph and replace with the following:

The water consumption displayed on the label shall be rounded up to the nearest whole number for the water consumption determined in accordance with Clause 10.2. For example, if the water consumption is 35.2 L, the water consumption displayed on the label shall be 36 L.

CI 10.4

Delete list item (e), including note, and replace with the following:

(e) WELS registration number.

NOTE: Model name and/or brand may be included but are not required.

Bibliography

- 1 After “Energy Ratings, available at www.energyrating.gov.au”, *add* the following:
AUSTRALIAN BUILDING CODES BOARD. *National Construction Code, Volume Three — Plumbing Code of Australia*
- 2 *Delete* “Australian Building Codes Board (ABCB) publications: Procedures for certification of plumbing and drainage products” and *replace* with the following:
AUSTRALIAN BUILDING CODES BOARD, *The Manual for the WaterMark Certification Scheme*
- 3 *Delete* “NOTE: See the WaterMark Schedule of specifications (WMSS) for updates to the Standards listed above, available at www.abcb.gov.au.”, and *replace* with “NOTE: See the WaterMark Schedule of Products for updates to the Standards listed above, available at www.abcb.gov.au.”